

FLIGHT

First Aero Weekly in the World.

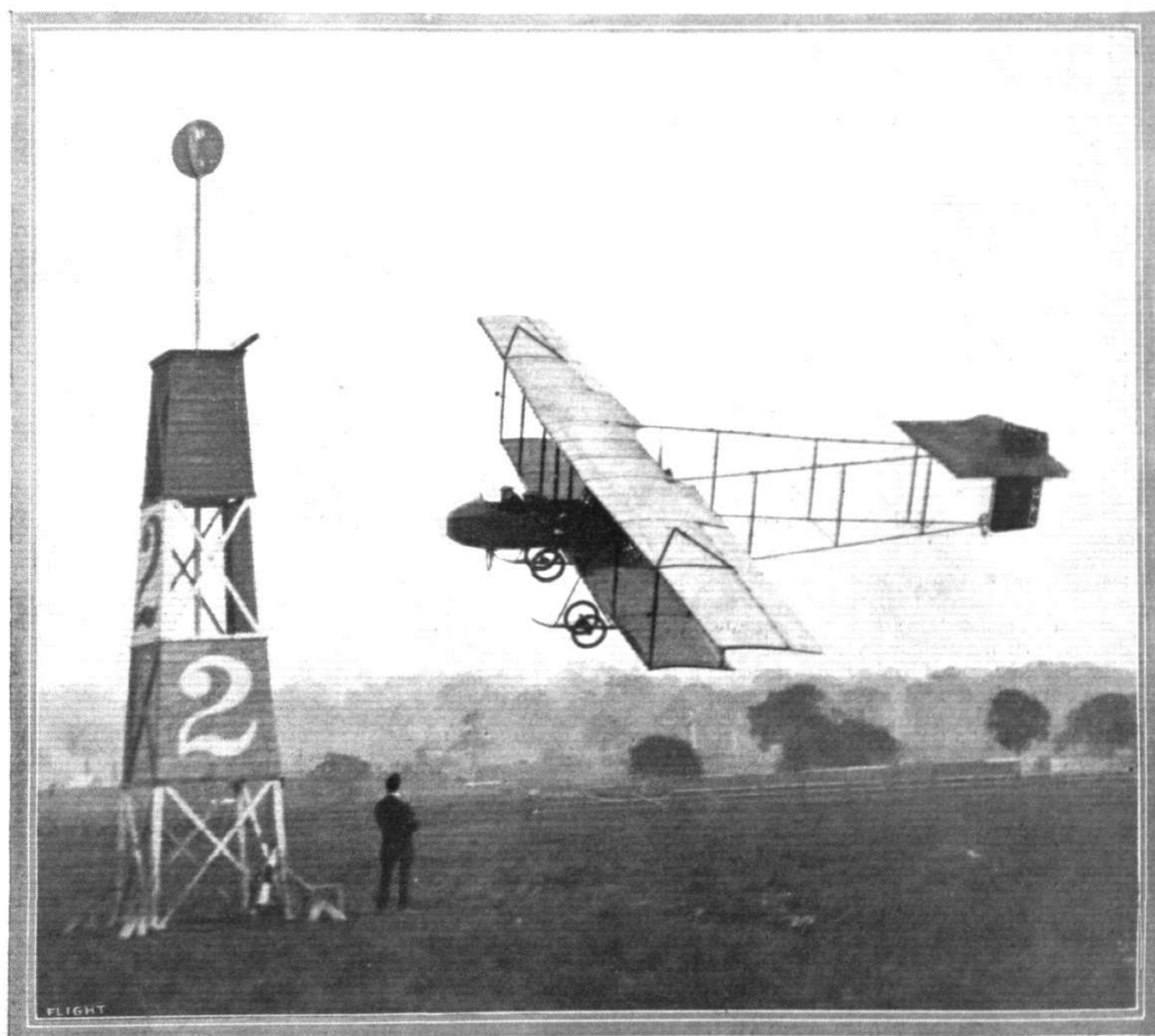
A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

OFFICIAL ORGAN OF THE ROYAL AERO CLUB OF THE UNITED KINGDOM.

No. 198. (No. 41, Vol. IV.)

OCTOBER 12, 1912.

[Registered at the G.P.O.] [Weekly, Price 1d.
as a Newspaper. Post Free, Ltd.]



"Flight" Copyright.

Mr. Claude Grahame-White, with Mr. Richard Gates as passenger, rounding pylon No. 2 "all out" during Saturday's Speed Contest at Hendon Aerodrome.

OURSELVES.—“FLIGHT” TO BE 3D.

ENCOURAGEMENT from our readers—the greatest of gifts that it is within the ambition of the Editorial “we” to acknowledge—is the inspiration of a change that we have long contemplated and now announce. Commencing with our next issue, FLIGHT will enter on a new phase of its career, and will make a progressive step that is the natural outcome of successful labour. We must be exonerated from the blame of arrogance if, on this occasion, we appear to give way to self laudation, for common courtesy demands no less than explanation and explanation needs no less than truth. Besides, the laurels of success were not of *our* creation; though ours, truly, was the sincerity of purpose for which they make reward.

Not ours was the power to compel so many thousands to buy this paper and to read it every week, but ours is the duty to respond to such support. FLIGHT in its present form has long since outstripped all reasonable dictates of commerce; from its first number, in fact, there was never an issue that did not cost us far more than a penny for the paper and the mere mechanical act of printing alone. For three years, our readers have had the advantage of purchasing a journal that would still be cheap at three-pence, for one-third that sum, and even of that third a considerable fraction escapes our coffers.

And now aviation itself is developing so rapidly and is opening up so many new aspects of interest, that never a week passes that we are not in conflict between our desire to cope more adequately with the situation and our ever pressing necessity of realising that even the best intentions must be subject to some reason in commerce. Either we must stand still and be false to our subject, or we must go forward and make a change in the price of FLIGHT. It has been for our readers to decide, and they have voted in no uncertain voice for progress. Very nearly every letter we have ever received embodying suggestions for this or that improvement has likewise contained the query, “Why don’t you charge more for FLIGHT?” Certainly in no other country in the world is it possible to buy a paper like FLIGHT for a penny, and the letters that we receive from Germany, from France, and from America, where the purchasing power of two cents is virtually nil, have long convinced us that the measure of appreciation that FLIGHT receives at the hands of its readers is not materially exaggerated by the popularity of its price.

When we founded the paper as a separate journal, as distinct from the section devoted to Flight in the *Auto.*, wherein it had evolved by degrees during a period of six years or thereabouts, we desired to afford every possible opportunity for the popularising of the new science by publishing FLIGHT at a price that would be an incentive for all to see for themselves what manner of thing it was that had been brought into the world. It was the best way to encourage the development of the art of flying and to extend the growth of this nascent industry, which, when FLIGHT was founded, was not only very young, but rather weakly. The first Aero Salon had just been held in Paris, fitting climax to the historic events that make the year 1908 for ever memorable in the annals of aviation. In that moment, the study of aerodynamics passed from the sphere of mere academic interest, into the realm of serious commercial business—aeroplanes were already for sale on the open market.

To develop the practical interest apace, the enthusiasm of the few had to be communicated to the many, and for this purpose the space available in a mere section of a motoring journal was obviously too small, while the time

interval between the successive issues of monthly publication was similarly too great. In the one case, it was impossible to deal adequately with the amount of information available, and in the other, impossible to provide current news. A weekly paper exclusively devoted to aeronautics was wanted, and FLIGHT appeared to fill the gap. Naturally, we desired to feel our way modestly, but the response was so immediate as to be astounding. Within a few weeks, we realised that we had launched on an undertaking that was far greater than ever we had anticipated, and that must inevitably necessitate a change if the success was continued. The issue of a journal like FLIGHT at a penny, not only left no room for expansion, but involved a most serious financial onus if the number of readers to be supplied and amount of matter to be published remained at all in the vicinity of the magnitude that they almost immediately assumed. Realising that much of it might be evanescent, we decided to wait awhile; the expense, after all, would be for a good cause in the long run, for the wider the field of interest in flying the more secure would be the foundation of the industry associated with FLIGHT. So we continued to wait, but each year brought new activities and more readers and each year also saw the interest in the subject develop an increasingly serious phase, demanding a more and more expensive paper for its adequate expansion. And, as we explained in the beginning, it has at last come to a point at which we must either change or cease to progress.

We are encouraged by our readers to progress and we feel secure in our faith that they will not allow the question of having to pay more for the paper, interfere with their support of our present policy, any more than they have been led by the former fact of FLIGHT being a penny, to profess a pseudo-interest in a science for which they felt no real concern.

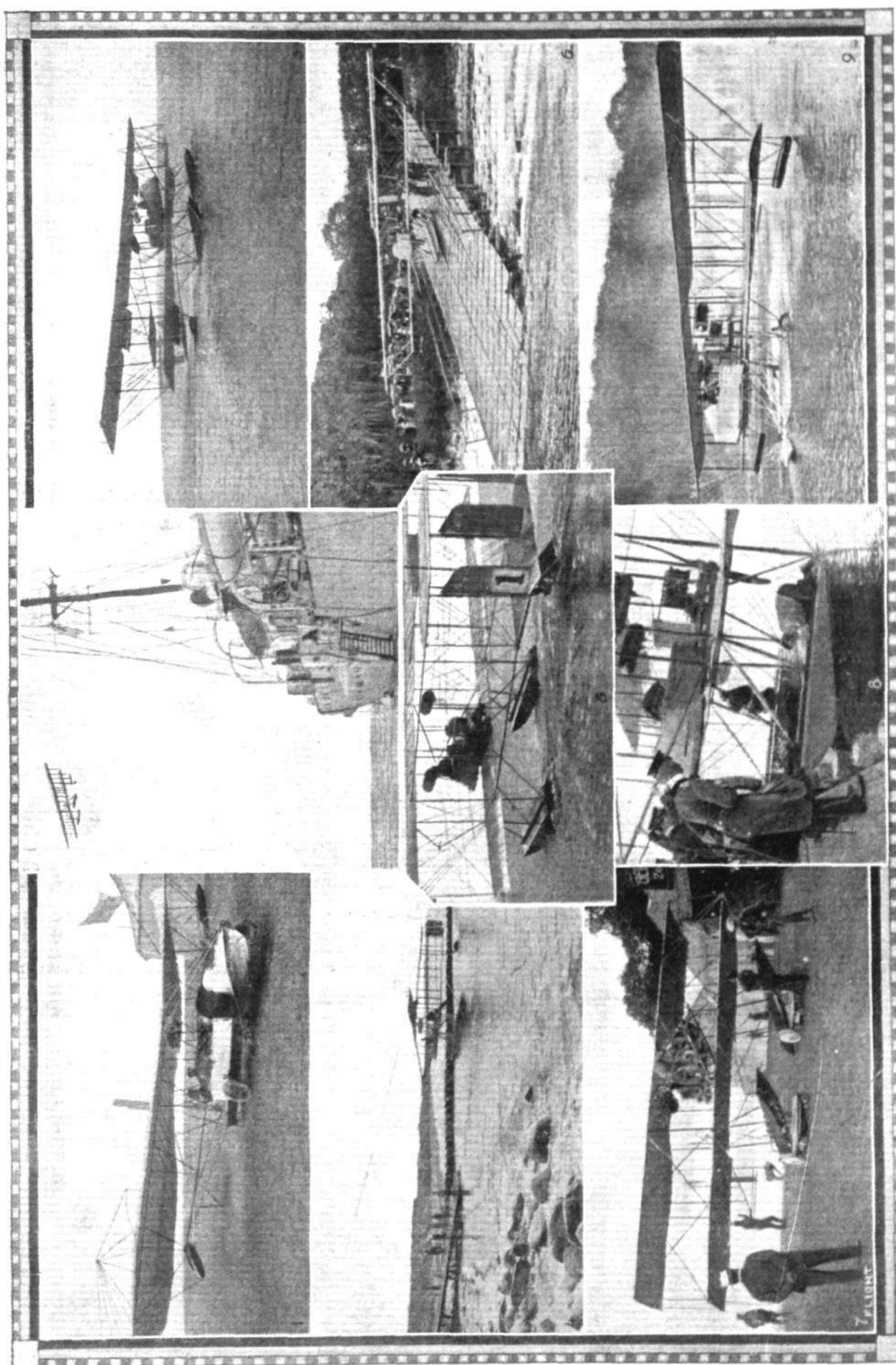
In deciding upon the change to 3d., we have naturally wished to make one that would prove effective, but, at the same time, we have not wished to raise the price more than is essential to the purpose in hand. It would have been useless, for instance, to have merely charged 2d., because that would have benefited neither our readers nor ourselves, inasmuch as it would still fail to cover the expenses of production, and would, therefore, have left as great a bar to progress as ever. At 3d., however, we hope to be able to even improve the paper and to meet more adequately the varied interests of our readers to whose suggestions we shall not be forced to turn such a persistently deaf ear. Again, however, are the laurels in our readers’ hands, the more support we receive from them the more can we do for them—each man benefits in person by what thousands are required to pay for as a whole.

In the past, we have received much encouragement from the friendly feeling that readers have evinced towards FLIGHT. In the future we hope we may still have cause to appreciate this same helpful support and thereby to score an even greater success.

A WORD TO OUR READERS.

To avoid disappointment, definite orders for FLIGHT, October 19th and following dates, should be placed with newsagents as early as possible, as the demand is likely to be great, and it is impossible to re-print the journal when it runs out of print.

Subscriptions received by the Publishers, at 44, St. Martin’s Lane, W.C. For rates see page 926.



HYDRO-AEROPLANES AT THE HEILIGENDAMM MEETING.—1. The Goedecker monoplane with its boat-shaped body. 2. The Albatross biplane flying round the cruiser "München." 3. Thelen in the Albatross. 4. Slipway and protecting breakwater. 5. View of the Albatross from behind. 6. Buchner on his Aviatik biplane on the slipway. 7. von Gorissen on the Ago biplane. 8. The forward floats of the Albatross. 9. Buchner afloat on his Aviatik biplane. From the *Deutsche Luftfahrer Zeitschrift*.

THE AVRO MONOPLANE.

NOT so very many months ago we all, more or less, looked on the all-enclosed aeroplane as a dream of the future. But things move quickly in the aviation world these days, and

him. He takes his bearings, and sees what is going on around him through non-inflammable celluloid windows let into the front of the fuselage. A window sunk into the floor shows him the ground

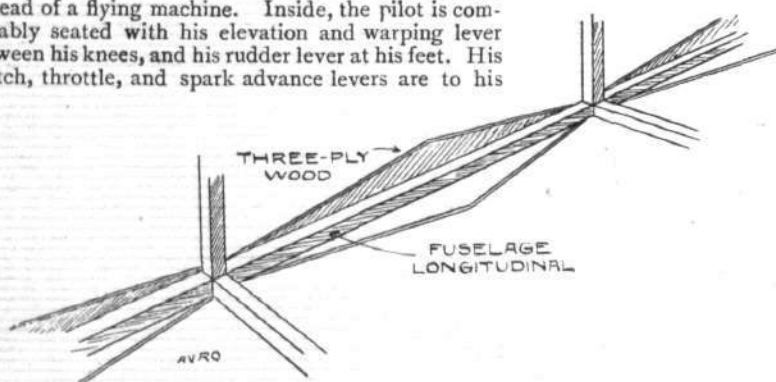


THE TOTALLY ENCLOSED AVRO MONOPLANE.—Side view.

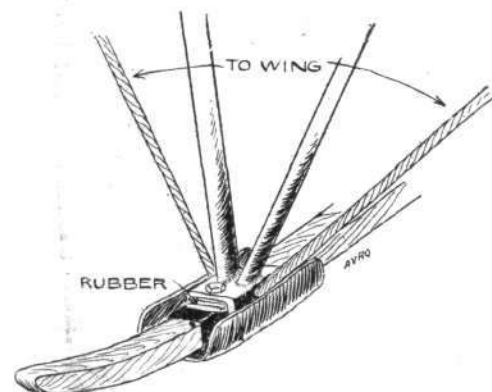
already Messrs. A. V. Roe and Co. and Lieut. Wilfred Parke, R.N., the clever pilot who flies their machines, have shown us the practicability of this type of craft. This monoplane is entered through an aluminium trapdoor in the top of the body, for all the world as if it were a submarine that was being boarded instead of a flying machine. Inside, the pilot is comfortably seated with his elevation and warping lever between his knees, and his rudder lever at his feet. His switch, throttle, and spark advance levers are to his

directly beneath him. Those to right and to left reveal the surroundings on either side.

When the machine first arrived at Brooklands it was generally



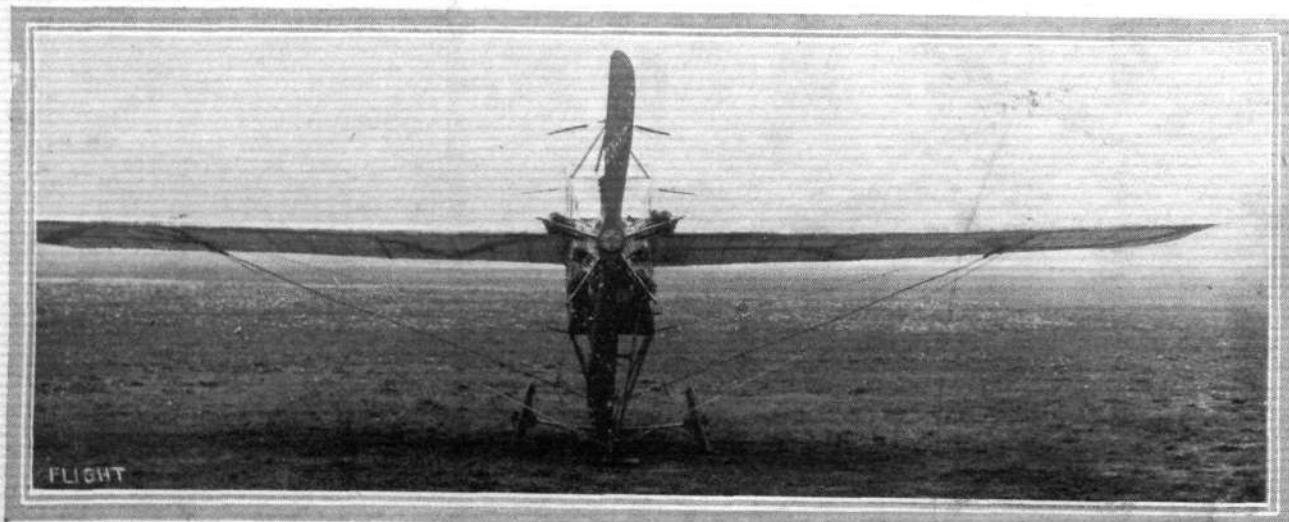
Showing how the fuselage longerons are strengthened by the application of three-ply wood on the Avro monoplane.



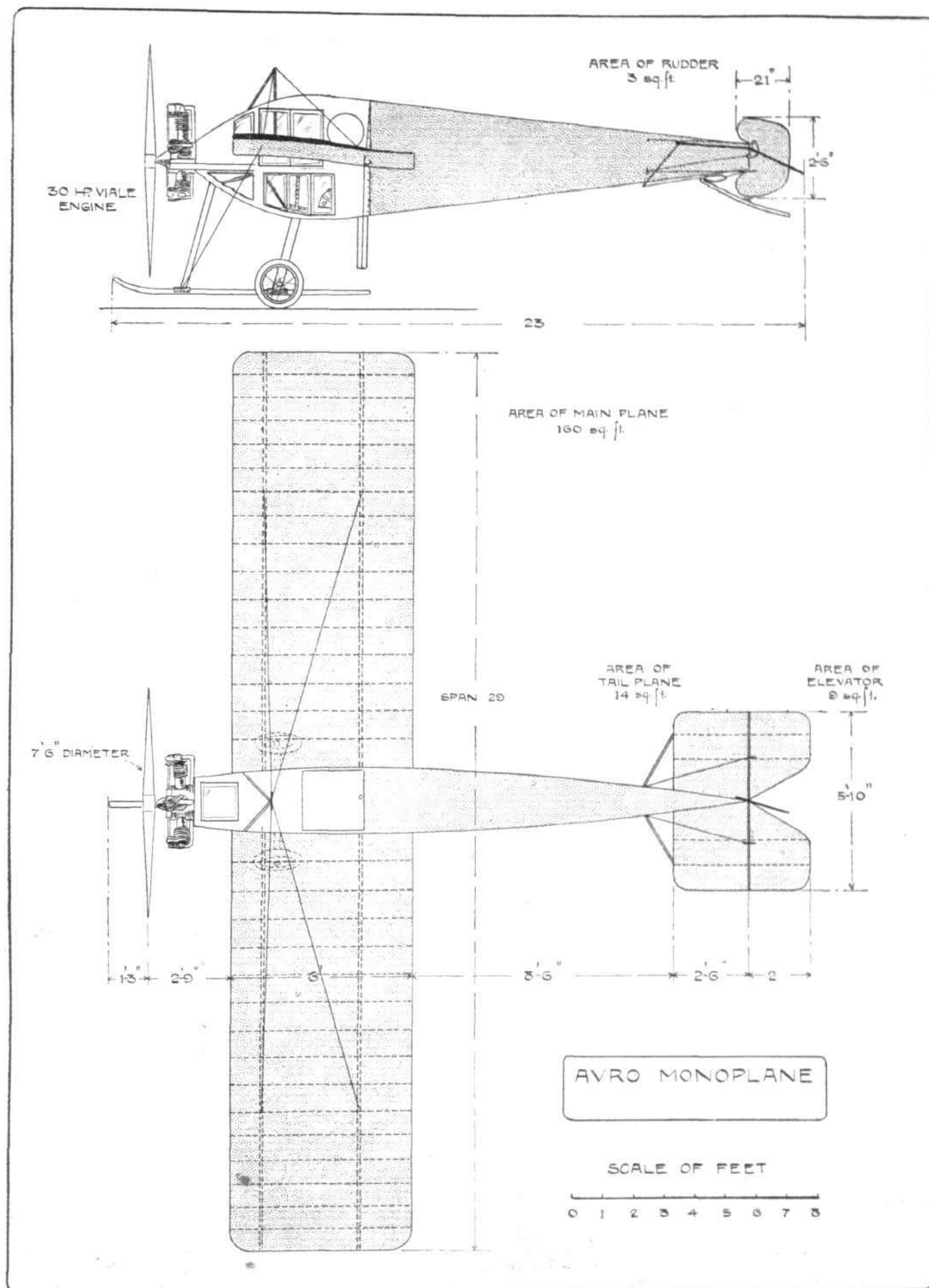
Details of the Avro Skid Attachment.—A rubber insert is arranged between the skid and the tubular steel struts supporting it.

right hand, and his various other instruments—his altitude recorder, his compass, his revolution indicator, his watch, his map holder, and his level indicator—a very important instrument to use with this type of machine, we should think—are arranged conveniently around

thought—the *habitués* of that aerodrome invariably sit in solemn conclave on any new arrival—that, with the respiration of the pilot inside, and the fine spray of oil thrown out with the exhaust of the Viale motor, the windows would soon become clouded over, and



The Avro monoplane, as seen from the front.



THE AVRO MONOPLANE.—Plan and elevation to scale.

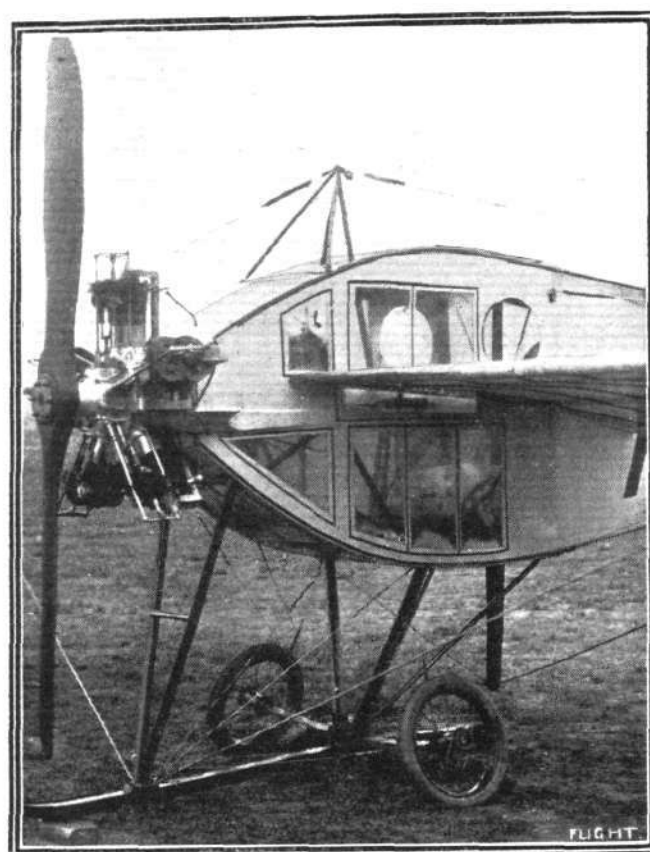
render clear vision impossible after a few minutes' running. After his longest trip, the underneath window was the only one that showed much mistiness, and the fitting of exhaust pipes leaving the exhaust clear of the windows would undoubtedly cure the trouble, for in the Viale engine there are no auxiliary ports drilled in the cylinder walls to scatter the oil far and wide. Flying through heavy rain might make things rather difficult for the pilot, but then, as a safeguard, there is an open round hole in the body casing on each side through which he can thrust his head if necessary.

We believe there is only one other all enclosed aeroplane in existence as yet, and that is the Rumpler monoplane shown at the last Berlin Aero Exhibition. In this machine the covering for the pilot and passenger is merely a superstructure applied to an apparently standard machine. The fuselage was not especially designed for that purpose as is that of the Avro monoplane.

Two other enclosed body machines have been built, but they can scarcely come under the same category—the 100-h.p. Blériot *berline*, for the pilot was accommodated outside the four-seated carriage-built body, and the Piggott monoplane, a British machine, for the fact that it has since the Aero Show of 1911 been modified, so that the pilot's head is outside the body of the machine. Thus, distinction attaches to those responsible for the monoplane under review, to the Avro firm for being the first to produce a machine of this type to prove itself successful in appreciably long flights, and to Lieut. Parke for having done the demonstration work.

The body is, as far as construction is concerned, identical with the later ones manufactured by this firm. The only difference it presents is that the ash *longerons* are reinforced by the application of triangular lengths of three-ply wood. This point is shown by one of our sketches. Its shape, viewed from one side, is approximately streamline, and exactly symmetrical about its longitudinal axis. In section it is rectangular. At the pilot's seat a section of the body may be represented by a vertical panel, so high that there is about 8 ins. of clearance between the top of the pilot's head and the roof of the fuselage. This measurement concerns the machine's present pilot, and would naturally vary with the overall height, in a sitting posture, of whoever may pilot a similar machine in the future. It is quite conceivable, following up this line of thought, that we shall one of these days be having our aeroplanes "made to measure."

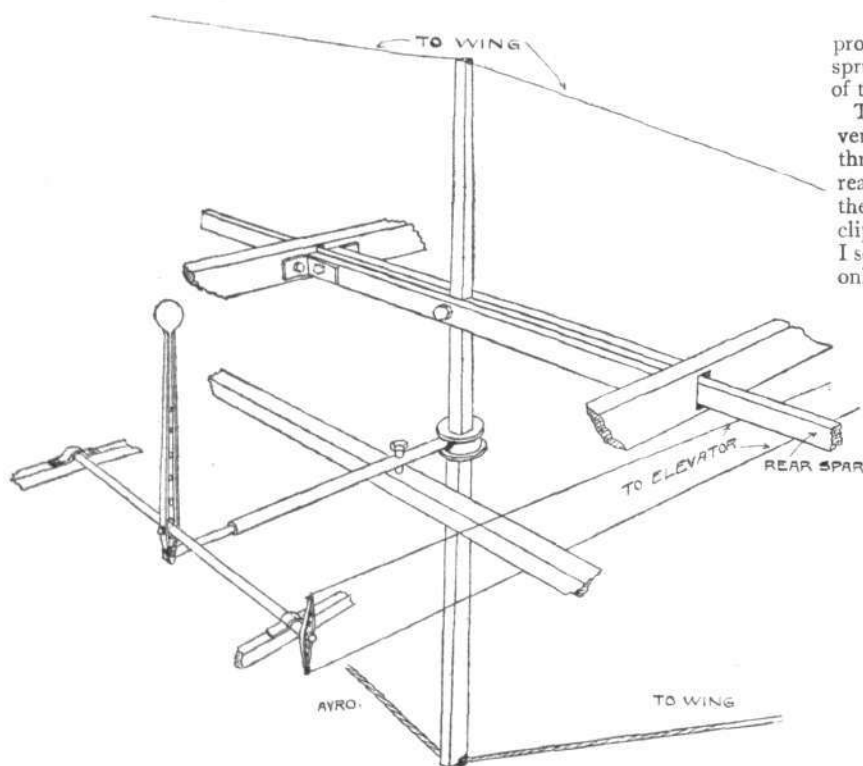
A steel cap embraces the four longitudinal body members in front,



THE AVRO MONOPLANE.—Detailed view of the landing gear, engine mounting, and the non-inflammable celluloid windows through which the pilot sees what is going on around him.

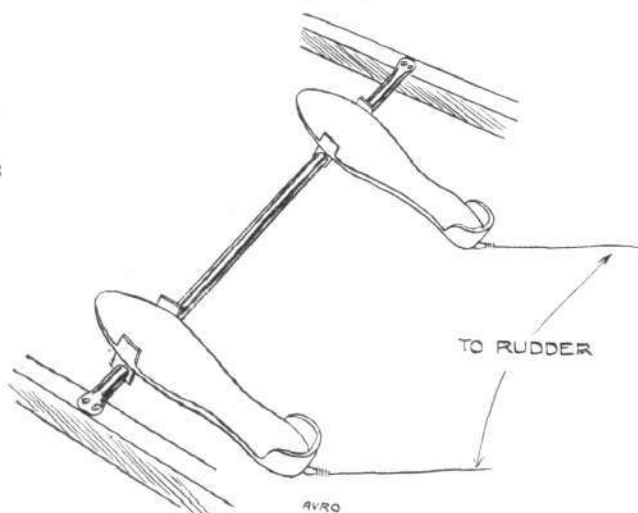
productions. One point, though, is noticeable—that the tail-skid is sprung in a manner that saves space and reduces the overall height of that section of the machine.

The landing gear, as in the case of the later Avro biplanes is a version of the Nieuport idea. The central skid supports the body through steel struts arranged V fashion—the front ones oval and the rear ones round in section. In both cases they slant forward to take the "drift" of landing. The laminated axle of spring steel is clipped to the skid. For the wings, except that the front spar of I section is built up instead of being hollowed out from the solid, the only point of more than usual originality is the manner in which the



DETAILS OF THE CONTROL OF THE AVRO MONOPLANE.—The whole of the rear wing spars, together with the upper and lower cabane strut, rocks in a single unit.

and to this the motor—a 35-h.p. 5-cyl. radial air-cooled Viale—is bolted. Further support is provided by two stout ash bearers, which extend horizontally, one on each side, from the front of the body. At the rear end is the tail, but for this organ no description is necessary, for in construction and arrangement it is similar to those we have described in the past in connection with other Avro



The Avro foot pedals by which the rudders are controlled.

rear spars, in warping rock together with the single strut forming the upper and lower *cabane*, as one unit. This, perhaps, can better be conveyed by the accompanying sketch. The way of operating the warping that this same sketch shows is also highly interesting. Quite a sound point in connection with the engine controls—the main wing and tail controls are, as can be seen, standard Avro—

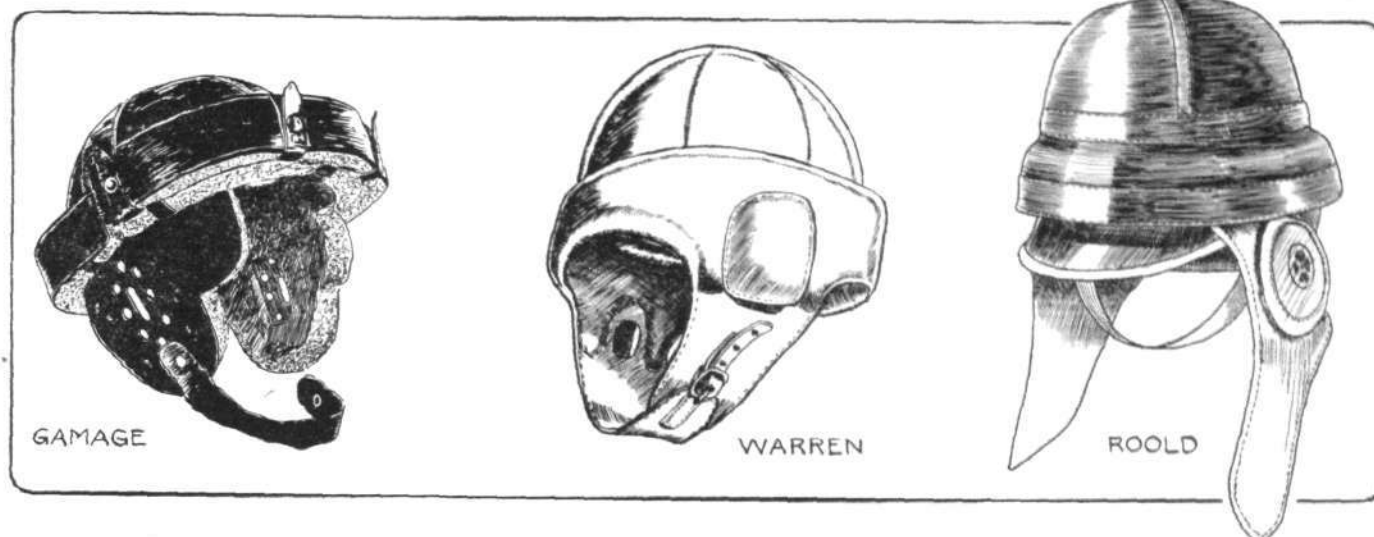
is that they are mounted, the switch, the throttle, and the spark advance lever in a line together. Further, the levers operate in the same direction—that is, both spark and throttle levers are pushed

forward to increase engine speed. The advantages of this system as against fitting the levers unsystematically, is too apparent to need dwelling on here.

SAFETY HELMETS.

THANKS to the "miraculous" escape from death of an Eastbourne flying pupil, safety helmets are very much in the air just now in the

mentioned specially-designed composition of cork, gutta percha and fibre. There is a remarkable amount of springiness in this padding,



literal sense of the word. It is surprising how many different helmets there are already in existence, and we give sketches and particulars of three of these.

It would be as well to point out that there are two distinct classes of safety helmet, which may be designated respectively as the *skin-saving* and the *life-saving* types. To the former class belong adaptations of the headgear designed for racing motor cyclists, one of the primary objects of which has to be to prevent abrasion of the cuticle through sliding along the ground at high speed. This type has its uses, but we believe that it is to the latter class that we must look for protection in flying mishaps.

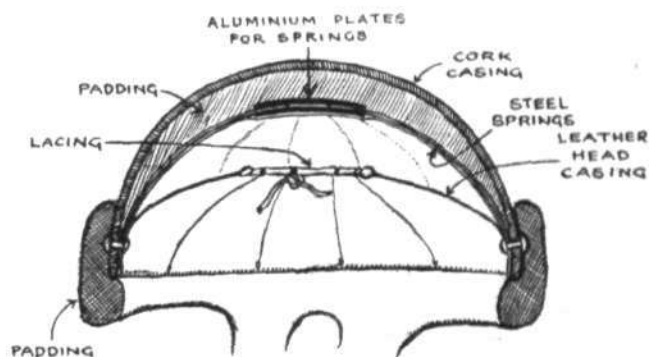
Both the Warren and the Roold helmets, which we illustrate, have great shock-absorbing properties, obtained respectively by the use of steel springs and of an amalgam of cork, fibre and gutta-percha.

In the Warren a number of steel springs or plates are riveted together between two aluminium bosses in the crown of the helmet, their outer ends being firmly attached to what corresponds to the brim. To the inside of this brim are sewn a corresponding number of strips of leather, in length shorter than the springs, and anchored together at the centre by a ring of strong twine. Owing to the shortness of the leather fittings, the aluminium boss is some inch and a half or two inches above the head of the wearer when the helmet is in place. A blow on any part of the top of the helmet is distributed to the brim by the springs, and in addition to being minimised by the latter, the shock is spread all over that part of the head enclosed by the flexible leather strips. Incidentally, it is interesting to note that Marcel Desoutter purposes to fit an inflated rubber cushion between the springs of the Warren and his head. This should undoubtedly add to the utility of this admittedly efficient helmet. A fine grade of Pegamoid composition leather is used for the covering.

An aluminium casque forms the skeleton of the Roold helmet, both sides of this framework being thickly padded with the afore-

mentioned specially-designed composition of cork, gutta percha and fibre. It has somewhat the same effect as springs in distributing the blow over the whole area of the head.

There are many well-known wearers of the Roold helmet, including Lieuts. Parke and Porte, Sig. Nardini, and many officers in the French and Russian Military flying battalions, while the Warren has amongst its adherents such well-known flyers as Ewen, Lewis



Section of the Warren helmet

Turner, and Desoutter. The sole agents for the Warren safety helmet are Aeros, Ltd., 39, St. James's Street, S.W., while the General Aviation Contractors, Ltd., 30, Regent Street, S.W., have the sole concession for the Roold.

The other helmet shown is sold by Messrs. Gamage, of Holborn. It has a sheet steel casque, padded with felt, and is fitted with thick felt paddings around the brim. It has considerable power of absorbing blows, due entirely to the felt padding.

AERO EDUCATIONAL PREMIUMS.

IN Mr. Griffith Brewer's article which we published on this subject on the 14th September last, he expressed regret at this fund being unable to include the qualification of those obtaining Royal Aero Club Certificates, and we are pleased to announce that owing to the generosity of Mr. A. Mortimer Singer in contributing £100 to this fund, it has been found possible to add those further qualifications to those on which premiums can be paid.

The fund now available amounts to £300, and the terms guiding the trustees in the division of premiums have been finally settled as follows:—

1. The fund to remain on deposit at an approved bank and the interest to be paid to the Wilbur Wright Memorial Fund.
2. The sum of £25 to be paid to every patent agent who, being a member of the Aeronautical Society, becomes an Associate Fellow of the Society.

3. The further sum of £50 to be paid to every patent agent who, being a member of the Aeronautical Society, becomes a Fellow of the Society.

4. The sum of £25 to be paid to every patent agent who, being a member of the Royal Aero Club, obtains that club's aviation or aeronaut certificate.

5. The further sum of £50 to be paid to every patent agent who, being a member of the Royal Aero Club, obtains that club's special aviation certificate.

6. No subscriber to the fund to be eligible to receive a premium.

7. In no case must more than two premiums be paid to any one candidate.

8. At the end of five years, i.e., on the 3rd of September, 1917, the fund to be closed and any surplus remaining to be distributed *pro rata* to the subscribers.

The Royal Aero Club of the United Kingdom

OFFICIAL NOTICES TO MEMBERS

Public Safety and Accidents Investigation Committee.

Report on the fatal accident to Lieut. E. Hotchkiss and Lieut. C. A. Bettington when flying at Wolvercot, near Oxford, on Tuesday, September 10th, 1912, at about 8.15 a.m.

Brief Description of the Accident.—Lieut. E. Hotchkiss, with Lieut. C. A. Bettington as passenger, flying on a Bristol two-seater monoplane fitted with an 80-h.p. Gnome, left Larkhill, Salisbury Plain, at about 7.2 a.m. on September 10th, 1912, to go to Hardwick, near Cambridge, in connection with the Army Manœuvres. When over Port Meadow, Oxford, at a height of about 2,000 ft., the aircraft was observed to be planing down in a normal manner. At a height of about 500 ft., the angle at which it was descending became very steep, and at about 200 ft. the fabric of the right wing appeared to burst and tear away in pieces. The aircraft then fell straight to the ground. The aviator and his passenger were both killed instantaneously.

Lieut. E. Hotchkiss was granted his Aviator's Certificate No. 87, on May 16th, 1911, by the Royal Aero Club, and Lieut. C. A. Bettington was granted his Aviator's Certificate No. 256, on July 24th, 1912, by the Royal Aero Club.

Report.—The Committee met on Tuesday the 17th, Friday the 20th, Friday, September 27th and Friday, October 4th, 1912, and heard the evidence of eye-witnesses. The representatives of the British and Colonial Aeroplane Co. attended and produced plans of the aircraft, and gave evidence on various points raised by the Committee. The Committee examined the two cables and quick release devices, as well as the steel strap of the wrecked aircraft, and has made some experiments with the steel strap.

From the consideration of the evidence, the Committee is of opinion that the following facts are clearly established:—

(1) That this particular aircraft was built about July 15th, 1912, and had taken part in the Military Aeroplane Competition on Salisbury Plain during the month of August, and had successfully passed all the tests with the exception of getting out of the ploughed field, and had been awarded a prize of £500. It was subsequently purchased and taken over by the Government.

(2) That, at a height of about 200 feet, the right wing of the aircraft failed.

(3) That a steel strap fell from the aircraft while in the air, and was picked up some 110 yards from the spot where the aircraft struck the ground. The steel strap was picked up within 15 minutes of the accident and was deeply embedded in the ground. A number of pieces of wood, portions of the wing, were picked up at the same time in Port Meadow in the vicinity of the steel strap.

(4) That this steel strap had holes for nine wood screws to fix it to one of the lower cross members of fuselage at a point just in front of the passenger. Two brass screws only, one at each extremity, were in place. The two ends of the strap were attached by a quick release device to the two inside cables, running right and left, to attachments on the front spars of the wings.

(5) That the thin tubular ferrule, which holds the lever of the quick release device to the cable, was missing from the right wing cable when the aircraft was examined after the accident. This could only have been lost by its fracturing. The ferrule on the left wing cable was found to be cracked, but otherwise undamaged.

(6) That the fabric with which the upper side of the right wing was covered, burst in the upward direction.

Opinion.—The Committee is of opinion that in the first instance one of the quick release devices opened and the cable became detached from the strap. This threw the whole of the stress on the corresponding cable from the other wing on the attachments of the strap to the fuselage. The quick release which attached the strap to the cable worked loose either shortly before or after the strap came away from the aircraft. The strap consequently fell to the ground. The lower surface of the right wing must have been pierced by a blow or blows from the cable which was hanging loose from the right wing. The bursting of the upper fabric of the right wing could only have taken place after fabric of the lower surface had been rent.

Recommendation.—The attention of manufacturers, designers and aviators is specially drawn to this accident and the cause thereof, with a view to care being taken to eliminate risk as far as possible from similar cause in the design of aircraft.

If a quick release attachment is to be embodied in the design of an aircraft, the Committee recommend that it should be so contrived that it cannot release itself owing to vibration or to alteration in the tension on it.

The Committee also draw attention to the possibility of a small initial damage causing total destruction of the wing surface.

The Committee further recommend that some experiments should be made on fabrics generally, both before treatment and after treatment, to determine the effect on their resistance to tearing.

The International Aero Exhibition, Paris.

In connection with the International Aero Exhibition which takes place in Paris, October 26th–November 10th, 1912, the South-Eastern Railway will issue week-end tickets on October 25th, 31st, and November 8th, available to return up to, and including, Tuesday following the date of issue. The week-end tickets are available on the above dates by the 10 a.m. train from Charing Cross arriving Paris 5.20 p.m., and the 9 p.m. train arriving Paris 5.30 a.m. The return trains from Paris are the 8.25 a.m., 2.30 p.m. and the 9.20 p.m.

The Return Fares are: First Class, £2 18s. 4d.; Second Class, £1 17s. 6d.; and Third Class £1 10s.

International Correspondence Schools.

The International Correspondence Schools in 1911, offered a Prize of £100 to the first of their students to fly one mile. On Friday, the 4th inst., at the London Aerodrome, Hendon, Mr. John Herbert James, a student of the International Correspondence Schools, on a Caudron Biplane, accomplished this flight, and therefore wins the Prize. Mr. Richard T. Gates kindly observed the flight on behalf of the Royal Aero Club.

The Prize will be presented to Mr. James at the Royal Aero Club on Tuesday next, the 15th inst., at 5 o'clock, by Sir Charles Rose, Bart., M.P., Chairman of the Club.

International Aero Exhibition, Olympia, 1913.

The Society of Motor Manufacturers and Traders has decided to organise an International Aero Exhibition at Olympia, under the auspices of the Royal Aero Club, in February, 1913. Full details will appear later.

Gift to the Library.

Mr. Mervyn O'Gorman has kindly presented the Club with a copy of his book "Airships and Aeroplanes."

British Empire Michelin Cup No. 1.

(Under the Competition Rules of the Royal Aero Club.)

The winner of the prize of £500 for the year 1912 shall be the competitor who, on or before October 31st, 1912, shall have remained the longest time in the air on an aeroplane in one flight without touching the ground. The flights may only be made between the hours of sunrise and one hour after sunset, and in order to qualify for the prize the competitor must make a continuous flight of at least five hours.

The entrant, who must be the person operating the machine, must be a British subject, flying on a British-made aeroplane, must hold an Aviator's Certificate, and must be duly entered on the Competitor's Register of the Royal Aero Club.

Rules and entry forms can be had on application to the Club.

British Empire Michelin Cup No. 2, £600.

(Under the Competition Rules of the Royal Aero Club.)

The contest for the current year consists of a cross-country circuit of about 186 miles. Competitors may choose their own course, which must be previously approved by the Club. The competition closes on Tuesday, October 15th, 1912.

The following courses may be used for this competition:—

Brooklands.	Laffans Plain.	Hendon.	Shoreham.
Larkhill.	Newhaven.	Brooklands.	Oxford.
Newhaven.	Larkhill.	Eastchurch.	Larkhill.
Brooklands.	Upavon.	Cambridge.	Shoreham.
	Laffans Plain.	Hendon.	

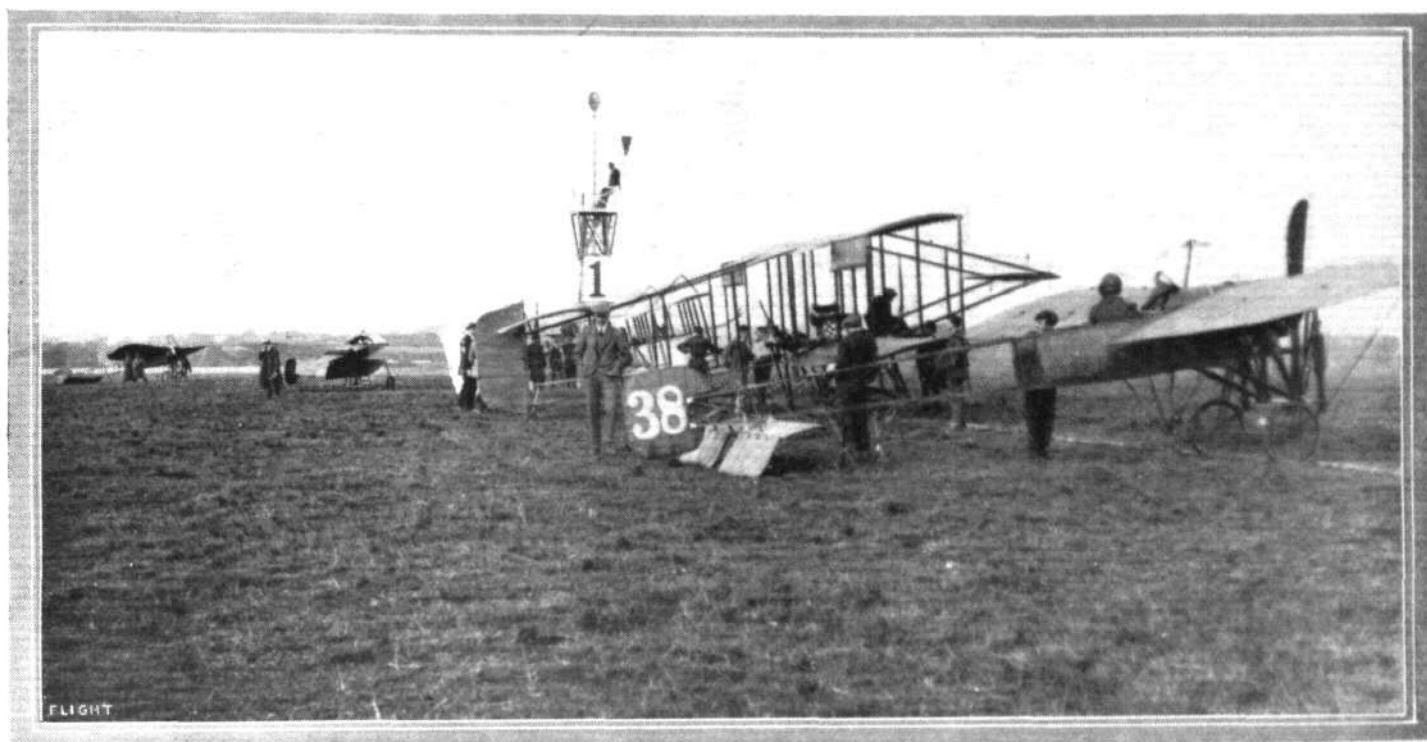
166, Piccadilly.

HAROLD E. PERRIN, Secretary.

FLYING AT HENDON AERODROME.

FLYING did not start Thursday last week until quite late in the afternoon, when Raynham had out the Flanders monoplane, which had been at the ground exactly a week. A considerable wind was

Slowly rising to a height of about 200 ft., he then set off at a great speed for Brooklands. Exhibition flights followed by Noel, Turner and Desoutter, and the rattle of a Green engine from the far



"Flight" Copyright

READY FOR THE FIRST HEAT IN THE SPEED COMPETITION AT HENDON ON SATURDAY LAST.—
Messrs. Hall, Lewis Turner, and Louis Noel ranged up to the taking-off line.

blowing, but without any ado Raynham took the air and made two or three remarkably steady circuits, apparently well throttled down.

end of the ground announced the advent of the Sonoda biplane, piloted by Meredith. This pilot executed several straight flights,



"Flight" Copyright

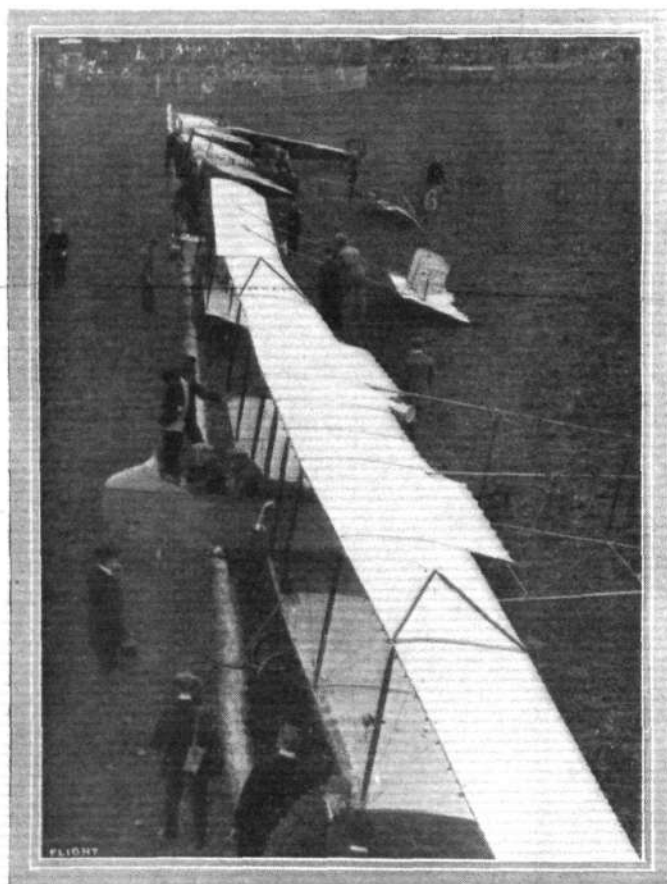
Mr. Louis Noel, who has made such splendid flights at Hendon, in the pilot's seat of the Henry Farman, ready to get away in the first heat for the Speed Handicap at Hendon last week.

making excellent landings, although the machine was exceedingly *cabré* at times. However, conditions were considered good enough to attempt a circuit, which effort, unfortunately, ended in disaster. It appeared to the writer that, contrary to the habit of most machines, this biplane tends to head into the direction of the wind, instead of edging up face to it, so that the first two turns were accomplished with comparative ease. It was when flying with the wind directly towards the old Ewen sheds that the difficulty arose. Meredith seemed to be unable to turn her sufficiently to keep within the borders of the aerodrome; consequently he essayed a sharp turn in order to get back, this resulting in a side-slip and a dive, the machine finishing up with her nose in the air in a field at the back of the Lymph Laboratory. Beyond wrecking the under-carriage—part of which is a skid about 3½ ins. wide by 2 ins. deep—and breaking the propeller, practically no damage was done, and the pilot was happily quite uninjured. Lewis Turner flew over to have a look at the wreck, and there was further intermittent flying for the rest of the evening until dark.

Hendon October Meeting, Saturday Last.

Cold weather, perfect for flying, and passable for photography; a good gate and a good show. Such were the characteristics of Saturday's meeting, which was one of the most successful, as it was one of the most enjoyable of the season.

Early in the afternoon Lieut. Parke arrived on the Handley Page monoplane, the exhibition proceedings being opened at 2.55 p.m., by Lewis Turner, who made a ten minutes' flight on the Howard Wright type G.-W. biplane. A new Grahame-White pilot, Marcus Manton, made his début with a couple of straights and two circuits, flown in excellent style on the school Farman, despite unmistakable signs of engine trouble. Hall was next out on his new Blériot machine, followed at 3.18 p.m., by Noel, who was up for 9 mins. on the 80-h.p. Gnome-Henry Farman. At about half-past three, Hall made another short flight, during which Sabelli arrived from Brooklands on the Hanriot (50-h.p. Gnome), having accomplished the journey according to a rough timing in 14 mins. Desoutter and Pickles, the latter of whom is known to aerodrome habitués as "Crosse and Blackwell," made short trial flights, after which the machines were lined up for the first heat of the speed handicap, particulars of which will be found at the end of these notes. Just before the start of the race



"Flight" Copyright.

Competitors ready for the second heat of the Speed Contest at Hendon last Saturday.—Reading from front to back: Messrs. Grahame-White and R. Gates (H. Farman), Sydney Pickles (Caudron), Marcel Desoutter (Blériot), and Sabelli (Hanriot).



"Flight" Copyright.

Mr. A. G. Reynolds, official timekeeper at the London Aerodrome for the flying contests.

Mr. Grahame-White arrived on the 70-h.p. "Wake up England" Henry Farman. He had returned from Cassiobury Park Golf Course whither he had conveyed a friend of Miss Maxime Elliott during the morning. Turner, the limit man in the speed handicap, got away at 4.10, followed by Noel and Hall, the latter narrowly escaping a serious spill through "stalling" his Blériot by trying to rise too fast, with the engine running none too well. In the second heat, everyone's attention was centred on Grahame-White's 70-h.p. Farman machine, which he was piloting with Mr. Gates as passenger, giving one of the finest displays of banking ever seen at Hendon. This exhibition was repeated in the final, which Grahame-White would most certainly have won, had not Turner, by skilful manoeuvring, slightly increased his speed over the course. As it was, the latter won by a margin of 10 secs.

In the second heat, the Hanriot of Sabelli—who, by-the-by, figures to the readers of one of the great Sunday papers as Mr. S. A. Belli—was noticed to be going badly, and on landing it was found that practically a complete tappet rod had disappeared.

Turner scored another success and a record in the bomb-dropping contest, his second shot landing right inside the bull. Noel and Hall both did quite well, but neither approached to the accuracy of Turner, who has a peculiar and original way of hurling his bombs out sideways at the target. Pickles on the Caudron, who would have been second, was unfortunately disqualified for competing below the minimum 300-ft. altitude.

Later in the evening Noel created some excitement by flying several circuits with two passengers.

The tabulated results of the competitions are as follows:—

Speed Handicap. Final.			
Name.	Start.	Time.	Net Flying Time.
	m. s.	m. s.	m. s.
Lewis Turner (50-h.p. G.-W. biplane)	2 39	12 31	15 10
C. Grahame-White (70-h.p. H. Farman, with passenger)	0 57	12 41	13 38
Louis Noel (80-h.p. H. Farman)	0 37	12 48	13 25
Marcel Desoutter (50-h.p. Blériot)	Scratch	13 15	13 15

Bomb Dropping.

1st. Turner, scoring 30 ft., 0 ft., 39 ft., average 23 ft.
2nd. Noel, average 108 ft. 3rd. Hall, average 218 ft.
Pickles, disqualified, average 74 ft.

FROM THE BRITISH FLYING GROUNDS.

Brooklands Aerodrome.

DURING the past week there has been quite a lot of flying done by the many schools here, the weather being very cold, but calm in the mornings and evenings, the daytime not being particularly suitable for tuition owing to *remous* when the sun is so brilliant.

Monday morning of last week, early, was foggy over the aerodrome, and when it had lifted Mr. Merriam, on the Bristol, was the first to try conditions, but it was not good enough for school work. In the evening both Mr. Merriam and Mr. Bendall were busy with pupils, taking up between them Capt. Pigot, Capt. Williams (a prospective pupil), Lieuts. Ali and Loulcheff. Pupils flying alone were Capt. Styles, Lieuts. Carmichael and Loulcheff, Mr. Payze, and Mr. "Darracq." Mr. Sabelli was out on Hanriot for half-hour flying well.

Tuesday no flying owing to bad wind.

Wednesday "Petre the Painter" doing straight lines on the Martin-Handasyde mono., the only machine out owing to wind.

Next morning was ideal for flying. At the Bristol School Mr. Merriam first out and flew round to "wake up" his pupils, finishing by means of a spiral *vol plané* from a height of over 1,000 ft., the propeller stopping before landing. Mr. Bendall soon after away on another biplane for test. Capts. Boger, Gibbon, Styles and Mr. Payze were doing circuits. Lieuts. Carmichael and Loulcheff figures of 8. Lieut. Prettyman, first time alone, made two circuits. He has the making of an excellent flyer. In the evening Messrs. Merriam and Bendall were testing the Bristols before school work, then Mr. Payze (a good flyer) made two circuits and Lieut. Carmichael at solos, Capts. Pigot and Reid receiving instruction. At Hanriot School Messrs. Sippe and Sabelli on monoplane, both doing excellently. Mr. Raynham arrived from Hendon on a Flanders mono.

Mr. Pashley on Friday flying well on Sommer biplane. During morning at Bristol School Messrs. Merriam and Bendall testing, the latter up with Capt. Pigot. Lieut. Carmichael made a solo flight, then took his *brevet* splendidly. Mr. Payze flying well, also Capts. Boger, Gibbon and Styles. Mr. Merriam up with Capt. Pigot, and up behind Capt. Reed. Mr. Darracq did two circuits. Mr. Bendall finishing the evening with a *vol plané* to sheds. Mr. Petre was out flying for three quarters of an hour at an altitude of 2,000 ft., on a Martin-Handasyde monoplane, afterwards flying again at an altitude of 2,700 ft.

Mr. Sydney Pickles arrived about 1 o'clock on the 45-h.p. Anzani-Caudron monoplane from Ewen's School, Hendon, taking 16 mins. for journey, on the return trip, 17½ mins. In the evening there were several machines in the air, amongst them being the Vickers, the Bristols, Spencers, Sopwiths, and many others. Saturday afternoon Mr. Spencer up with pupils and passengers also giving good exhibitional flying. Lieut. Parke flying the Hanley Page monoplane splendidly. Mr. Pashley was noticed also making some good flights. Mr. Raynham, on the Flanders monoplane, was doing some very clever "stunts." Mr. Merriam was seen as usual flying very gracefully and making sharp banked turns, and Mr. Bendall flying in his good old style and making neat *vol planés*.

Mr. Sabelli flew to Hendon on a Hanriot monoplane, reaching an altitude of 3,000 ft. *en route*, the journey taking 14 mins.; he competed in the race at that place with only six out of seven cylinders working, the seventh having a tappet-rod broken on the exhaust-valve.

Lieut. Parke, R.N., also flew to Hendon on a Martin-Handasyde monoplane about 1 o'clock.

A keenly-contested Quick-Starting Competition was decided with the following result:—

- | | | |
|--|-------|----------|
| 1. E. C. Pashley (Sommer biplane) | ... | 5½ secs. |
| 2.) dead (H. Barnwell (Vickers-Farman biplane) | } 6 " | |
| 3.) heat (H. Hawker (Sopwith-Farman biplane) | | |

On running off the dead heat Mr. Barnwell did 4½ secs. and Mr. Hawker 5 secs.—both faster than the winner's time.

Other times:—

- | | | |
|-------------------------------------|-----|----------|
| S. Hedley (Sopwith-Farman biplane) | ... | 6½ secs. |
| F. P. Raynham (Flanders monoplane) | ... | 6½ " |
| F. W. Merriam (Bristol biplane) | ... | 7 " |
| T. Sopwith (Sopwith-Farman biplane) | ... | 7 " |
| T. Sopwith (Sopwith biplane) | ... | 7½ " |
| H. Spencer (Spencer biplane) | ... | 8½ " |

Sunday, at Bristol School, two more pupils passed for *brevet*, making three for the past week, the names being Lieut. Carmichael, Capt. Gibbon and Lieut. Loulcheff, the latter being the first Bulgarian officer to receive his *brevet* in England.

Mr. Raynham was out on a Flanders monoplane, attaining an altitude of over 2,000 ft.

There was a large number of spectators present to witness an

interesting and exciting Relay (Dispatch Carrying) Competition, in which the following well-known aviators competed in pairs, the competitors finishing within 4½ secs. of each other, the result being:—

- | |
|--|
| 1. H. Spencer (Spencer biplane). |
| 11. Barnwell (Vickers-Farman biplane). |
| Time, 6 mins. 57½ secs. |
| 2. E. C. Pashley (Sommer biplane). |
| T. Sopwith (Sopwith biplane). |
| Time, 7 mins. 59½ secs. |
| 3. S. Hedley (Sopwith biplane). |
| F. W. Merriam (Bristol biplane). |
| Time, 8 mins. 1½ secs. |

The first competitor in each pair started off with the despatch, flew two circuits, alighted from his machine, handed despatch to his partner, who in his turn flew two circuits, and handed the despatch to the starter, the total time taken by the two men being recorded.

Vickers School.—Capt. Stott out early Monday last week on No. 2 putting in some good practice and showing marked improvement, while Knight taking up pupils on the Farman for instruction. Wednesday Capt. Stott and Mr. Joubert de la Ferte both on No. 2 for some time, and both getting on well. Next day Capt. Stott and Mr. Joubert de la Ferte were taking No. 2 in turns. The latter showed great improvement, doing nice curves and landings, and he should soon be fit for one of the faster machines. Knight took out the Farman, flying continually with passengers in good style. MacDonald brought out No. 6 testing new propellers.

Friday, Capt. Stott and Mr. Joubert de la Ferte practising on No. 2. Capt. Wood and Mr. Knight on the Farman, all flying for a considerable time, and on Saturday, Capt. Stott on No. 2 seems to have got over his first difficulties, and to be making rapid progress. Mr. Barnwell flying the Farman, and showing himself as proficient with the biplane as with the monoplane.

MacDonald, Sunday, testing the Viale engine and No. 6, with Capt. Beatty as passenger; while Mr. Barnwell was flying off and on all day on the Farman, winning in the evening the despatch competition. Mr. de la Ferte on No. 2 for a short time in the evening, doing well; and on Monday Capt. Stott, on No. 2, getting his curves in good style now. MacDonald also out on No. 6, with Mr. Barnwell as passenger.

Eastbourne Aerodrome.

Splendid progress has been made by all the pupils during the past week. Lieut. Murray successfully completed the tests for his certificate on Sunday evening, and Mr. Gassler did the first half of his test on Monday morning. Messrs. Foggin and Lerwill are also quite ready to take their certificates.

By 4 p.m., Tuesday, the weather was perfect, and Mr. Hammond took up in turn Lieuts. Murray and Minchin, and Messrs. Roberts and Lerwill for instruction on the Bristol. Mr. Fowler was also out



Mr. F. Warren Merriam, the very able manager of the Bristol Co. at Brooklands Aerodrome, just going for a flight to test one of the Bristol monoplanes for Prince Cantacuzene.

on the Blériot. Next morning Mr. Gassler was out shortly after 6 a.m. on the 28-h.p. Anzani and made two circuits at about 150 ft., on coming down he handed the machine over to Mr. Foggin, who made one straight and then started for a circuit, which he completed in excellent style. Mr. Hammond was out in the evening on the Bristol and put all the pupils through their paces.

Thursday, Messrs. Gassler and Foggin were out early on the 28 doing circuits, Lieut. Minchin made several very good straight rolls on the 25 Anzani. Mr. Fowler was on the Bristol giving instruction to Lieut. Murray and Mr. Lerwill. Mr. Hammond gave two passenger flights in the afternoon, and afterwards took up Lieuts. Murray and Minchin and Messrs. Roberts and Lerwill for instruction.

Messrs. Gassler and Foggin were again out early Friday, both flying very steadily. Lieut. Murray and Mr. Lerwill were doing straights on the Bristol under the instruction of Mr. Fowler. In the afternoon Mr. Hammond gave a very fine exhibition flight, and then started school work.

On Saturday, Lieut. Bone took on the 28-h.p. Anzani, flew one circuit, landing well. Messrs. Gassler and Foggin also made several circuits on the same machine, both flying steadily. Mr. Hammond was again hard at work in the evening with pupils. Lieut. Murray and Mr. Lerwill both had their first experience of the pilot's seat. After two circuits in the pilot's seat with Mr. Hammond up behind, Lieut. Murray made his first solo and flew the machine extremely well. Next day he made several solos on the Bristol in the morning, doing right and left-hand turns with perfect confidence. Lieut. Bone and Messrs. Gassler and Foggin were hard at it on the 28-h.p. Anzani, Mr. Gassler making one particularly fine flight, during which he got up to well over 400 ft., and landed with a well-judged *vol plané*. Mr. Foggin was also handling the machine very well, his landings being much improved. By 4 p.m. it was practically a dead calm and, after trying the conditions, Mr. Hammond decided to let Lieut. Murray go for his certificate. At the end of twenty minutes Lieut. Murray had completed the first half of the test, and after a short rest, he went up again and got through the second half in about the same time. His performance was an excellent one from start to finish, his turns round the posts being particularly well judged as also were his landings.

At about 6.30 Monday, Mr. Foggin started for the first half of his test. He completed the necessary five figure eights, but owing to there being a slight fog he misjudged one of his turns, and omitted to go in between the posts, shortly after which, the engine not running very well, he was obliged to descend. The engine having been tuned up, Mr. Gassler ascended for the first attempt at his certificate flight. The fog had by this time cleared, and weather conditions were almost ideal. Gassler had the machine under perfect control, and flying with rare judgment completed the first

half of the test without fault. Later in the day Mr. Lerwill made his first solo flight on the Bristol biplane, and seemed quite at home. Mr. Cody passed the aerodrome in the morning bound for Farnborough. Shortly afterwards, however, a telegram was received to announce that Mr. Cody had been obliged to descend near Lewes. Mr. Fowler accordingly flew over to see if he could render any assistance, but Mr. Cody had already left for London.

Tuesday, Mr. Foggin flew in the morning, and in the afternoon Mr. Hammond flew over to Bexhill with Mr. Bone, while Mr. Fowler was out amusing the spectators in the evening.

Farnborough (R.F.C.)

SEVERAL new machines have been put through their paces during the past week, including a couple of new 70-h.p. Breguets, a Short, a Caudron, and a Deperdussin. On Tuesday week, Sopwith was testing a new Short biplane, and after several circuits of the aerodrome, it passed the rolling test. The Breguets were tested by Montelent, and on one of them on Wednesday week he was up for over an hour. Good flights have been made on both these machines during the week by Capt. Rayleigh. They have suffered rather badly at the hands of some of the pupils, but have since been repaired. The little Caudron biplane was put through its tests by Mr. Sydney Pickles, who put up an hour's flight on Thursday week. The new Deperdussin was out on Saturday with Lieut. Gordon-Bell at the wheel. Capt. Rayleigh has done some good work on the 100-h.p. Breguet, and also the Maurice Farman machine on which Major Moss and Lieut. Herbert have likewise been doing well. Practically every day, Mr. de Havilland has been out on one machine or another taking up passengers, and a large amount of school work has been accomplished. Mr. Cody has been busy tuning up the 100-h.p. Green machine which he has installed on his biplane so as to compete for the Michelin all-British prize, and has made several good practise flights on the prize 'bus.' On Thursday week, Major Burke, while flying biplane 204, had to change his course very suddenly to avoid another machine, and was driven into the trees. The biplane was wrecked, but fortunately the pilot was unhurt.

Liverpool Aviation School, Waterloo (near Liverpool).

THURSDAY, last week, Birch made a few straight flights in a strong wind on the Y-engined machine. On Friday he did the five figures of 8 on the measured course, which, however, did not count in the absence of official observation. Hardman did a figure of 8, but with a rising wind decided not to continue. Monday, both Birch and Hardman did all their *brevet* tests in the morning and afternoon, which terminates their tuition at this school. Birch also put in a circular flight, going as far as Hightown, and on his return attained a height of 1,000 ft., from which he planed down in the neighbourhood of Seaforth with the engine switched off. At the same time Melly on the two-seater was doing figures of 8 in front of the hangars and came down with a missing engine.

London Aerodrome, Collindale Avenue, Hendon.

Grahame-White School.—Monday last week school opened at 3.50 p.m. when Lieut. Allen was out on No. 7 biplane doing some good straight flying, showing good form. Messrs. Wilson, Fuller and Howard-Wright also attended, all doing straights. Later Messrs. Allen, Wilson and Fuller each took a five minutes turn on No. 7, doing circuits. At 5.30 Mr. Howard-Wright went out with Instructor Noel for 15 minutes straight flying.

School opened Tuesday at 6.40 a.m., attended by Lieut. Allen, Messrs. Wilson, Clark, Fuller and Howard-Wright. Lieut. Allen took a passenger flight with Instructor Turner for further instruction in circuits, &c., on No. 5 biplane. The other pupils took similar instruction on the same machine.

Thursday, Messrs. Howard-Wright and Carr did straights with Instructor Noel on No. 7 biplane. Lieuts. Allen and Small and Mr. Hoelscher straights on same machine. Afterwards Lieut. Allen, Messrs. Fuller and Clark, made circuits for about 10 mins. each on No. 5. Major Madocks and Mr. Davies rolling on No. 7. Next day, at 6 a.m., Messrs. Clark and Howard-Wright rolling on No. 7. Messrs. Hoelscher and Howard-Wright and Lieut. Small took passenger flights with Instructor Turner on No. 5 biplane, Lieut. Allen circuits on No. 7, Capt. Halahan, Lieut. Small straights on No. 7, Mr. Fuller straights on No. 5. At 7.45 a.m., Mr. Wynne went for *brevet*, passing all tests well, flying steadily throughout at an altitude of 200 ft. Pupil did altitude test 250 ft., and landed within 20 yards of observers.

School opened at 10, Saturday, in gusty weather. Major Madocks and Mr. Howard-Wright rolling on No. 7. Capt. Halahan did some good straights. Lieut. Allen afterwards did circuits on No. 5.

Sunday, starting at 8 a.m. Major Madocks rolling on No. 7, afterwards doing straights with instructor on No. 9. Lieut. Small and Mr. Wilson out on No. 7 doing straights. At 8.40 a.m. Lieut. Allen went out on *brevet* machine, doing circuits under Instructor



Mr. S. Summerfield, who recently obtained his Royal Aero Club certificate (No. 292) at the Bristol School, Brooklands, in excellent style, and has the making of a really good flyer.

Noel, afterwards going for, and passing tests for, *brevet*. The pupil flew well in first test at an average height of about 120 ft., landing 25 yards from observers; in second test he flew at 200 ft., landing on mark.

Sunday afternoon there was a very good attendance to witness some splendid exhibitions of flying which were given in spite of the heavy fog, which made it somewhat risky. Mr. Turner commenced proceedings, as usual, at 3.30 p.m., giving a good exhibition on the Grahame-White biplane, 50-h.p., followed by M. Desoutter, who was in the air continuously for 1½ hours. Mr. Noel on 80-h.p. Farman, and Mr. R. T. Gates afterwards going up on the same machine.

At about 4.30 p.m. Mr. Grahame-White flew over from Watford, with his chief mechanic, Carr, as passenger. At 5.30 p.m. he made some magnificent exhibitions of banking, accompanied with a passenger, on the 70-h.p. Farman. Messrs. Lewis Turner, Louis Noel and J. L. Travers busy all the afternoon carrying passengers. The Handley Page monoplane made several flights during the afternoon, with and without passengers, flown by Lieut. Parke, R.N. Lieut. Porte flying the Deperdussin monoplane, 60-h.p., and M. Sabelli was up on 70-h.p. Hanriot monoplane.

Blackburn School.—Monday, last week, Mr. H. Blackburn made trial flight on No. 3 machine and found wind very gusty. At 4 p.m. the wind having died down, Messrs. Scott, Spink and Buss turned out for practice. Mr. Scott made four good straight flights, landing after the fourth flight with a neat *vol plané* with engine off. Both Mr. Spink and Mr. Buss made some good long trips, Mr. Spink taking the machine up rather too high, but fortunately managed to land well without mishap.

Next day, at 7.50 a.m., Mr. H. Blackburn made trial flight to test air. Mr. Scott then did straights, Messrs. Buss and Glew finishing morning's work with rolling practice. Late in the afternoon Mr. Scott put in two more good straight flights, whilst Mr. Buss was out rolling on No. 1 machine.

Mr. Blackburn first out Saturday testing conditions. Dr. Christie then took over No. 3 machine for rolling practice. Mr. Scott made two straights on same machine, afterwards putting in more straights on No. 1 machine. Messrs. Buss and Glew terminating morning's work with rolling practice on No. 1 machine.

Sunday started with rolling practice by Messrs. Spink, Buss, Glew and Dr. Christie. Mr. Scott afterwards put in a number of good straights, practising landing. Mr. H. Blackburn terminated morning's work with short flight. Pupils out about two hours altogether—a good morning's work.

Blériot School.—M. Gandillon had LB 2 to himself during Monday afternoon last week, and was doing very good straights. Teulade did a straight flight on No. 3, and is practically ready for his *brevet* tests. M. Gratien put in a roll on No. 1, and is displaying great keenness. Tuesday, M. Gratien only was out, and managed to put in just one roll on LB 1. No school work possible Wednesday, but Thursday, Messrs. Gandillon, Reilly, and Gratien all out at work, the former doing straight flights on LB 2, and Messrs. Reilly and Gratien rolling practice on No. 1.

Not much school work possible Friday owing to the number of *brevet* tests taking place. M. Gratien, in engineering a roll across in between two tests, was so unfortunate as to lose half his left wing, owing to trying conclusions with another Blériot monoplane which proved the better. The machine was taken into the sheds and fitted with another wing, reappearing next day. Saturday, Mr. Sacchi did a straight flight on LB 3, and Mr. Reilly had No. 1 out, and was taxiing well across the ground and back.

W. H. Ewen School.—The past week has been a big one for the W. H. Ewen school. A considerable amount of good work has been put in by all the pupils. On Monday, September 30th, the pupils were out at 4.30 p.m., when the wind died down, and M. Baumann was getting some good results from the pupils on monoplanes Nos. 1 and 2. Lieut. Eric Conran and Mr. H. James made several nice flights, with good landings, on No. 2 monoplane, while Messrs. L. Russell and Lawford were doing some progressive work on monoplane No. 1.

Mr. Ewen was flying the 35-h.p. Caudron biplane, after which he was instructing Capt. Chamier and Mr. J. H. James on the same machine, both pupils putting in some creditable flying. Later, Mr. J. H. James flew several fine circuits, and Capt. Chamier and Mr. Edmund put in several good straight flights. Mr. Ewen finished the day's work by making a nice flight in the gathering darkness.

Very little school flying practice was got through on Tuesday on account of the wind. In the evening, however, Mr. Sydney Pickles made a pretty flight on the 35-h.p. Caudron, after which Mr. J. H. James put up a nice flight on the same machine. Despite the strong wind he flew confidently at an altitude of 200 ft., describing a figure of eight and landing in perfect style. M. Galy was also doing some good flying on the 45-h.p. two-seater Caudron biplane, circling the

aerodrome at a height of 600 ft. and carrying out some quick climbing and diving and sharp turns.

Wednesday was a blank day for pupils as far as outdoor practice was concerned. Mr. Pickles, however, put up a capital exhibition flight on the 35-h.p. Caudron biplane in a 30-mile wind, for the benefit of some Scottish visitors. After several circuits at 500 ft. he finished with a beautiful spiral *vol plané*. The weather was also against school work on Thursday but the pupils were very busy assisting in the hangars in tuning up the Caudron racing monoplane.

The school work started at 5.45 a.m., on Friday, and a glorious day's work was put in. Lieut. Eric Conran on No. 2 monoplane made several fine flights, practising half circuits. Capt. Chamier and Mr. H. James were flying all morning on the 35 Caudron. During the forenoon Mr. Pickles made his initial flight on the Caudron racing monoplane. He quickly followed this by another two flights, in which he showed perfect control both in flying and landing. At 12.56 p.m. he started to pay a flying visit to Brooklands, where he arrived at 1.10 exactly, thus taking 14 mins. for the trip. After lunch there he put up an exhibition flight, impressing the Brooklands *habitues* with the speed of his machine. In the meantime Mr. Ewen and M. Baumann had the pupils hard at work. Lieuts. Bayly and McMullen and Messrs. Russell and Lawford got in some good flying practice on the school monoplanes.

The event of the afternoon, however, was a splendid exhibition of circuit and figure eight flying put up by Mr. J. H. James on the 35-h.p. Caudron biplane, by which he gained, under the observation of Mr. Richard T. Gates (for the R.Ae.C.) and Mr. Odell and his staff, the £100 prize offered by the International Correspondence Schools. Immediately after, the same pupil was in the air again, and went for his *brevet* tests, which he passed in excellent style, flying most of the time at 250 ft. on the 35-h.p. Caudron. Here Mr. Sydney Pickles appeared as a tiny speck on the horizon on his return journey from Brooklands, having accomplished this against the wind in 17½ minutes. Mr. David Edmund then flew a circuit and figure eight on the 35-h.p. Caudron biplane, after which he started out for his *brevet* tests. The first half he accomplished in excellent style, but had to delay the remainder on account of the rising mist. M. Galy was on the 45-h.p. two-seater Caudron, doing some solo flying and passenger carrying.

The aerodrome was enveloped in fog on Saturday morning, but as soon as this lifted at 9 a.m. the pupils were out. After a short flight on the 35-h.p. Caudron by Mr. Pickles, Capt. Chamier, Lieut.



"Flight" Copyright.

Mr. Marcus Manton, who has just secured his pilot's *brevet* and made his *début* in exhibition flying for the Grahame-White Co. at Hendon on October 5th.

Eric Conran, and Mr. H. James each made six straight flights on the same machine. These three pupils are flying the Caudron excellently, and ought very soon to increase the number of Caudron brevets.

Quite a good morning's work was got in on Sunday. M. Baumann got some splendid results on the school monoplane, with Mr. L. Russell rolling and hopping and Mr. Lawford making several fine flights and good landings from 20 ft. Mr. Pickles made a short test flight on the 35 Caudron, after which he handed the machine over to Capt. Chamier, who made six very fine straight flights, keeping the biplane absolutely steady in the air and landing well. Lieut. Eric Conran and Mr. H. James thereafter put in several fine flights on the same machine.

Jameson and Temple School.—The school officially opened on Wednesday last week, when G. L. Temple, the first pupil, who will be remembered as a racing motor-cyclist, received instruction in controls. Following up on Thursday with constructional work in hangar, weather being too rough for flying practice. Next day he was rolling on Blériot, and made some excellent straights, appearing to have the machine well under control for a novice, improving further on Monday last, including turns in excellent form.

Salisbury Plain.

Bristol School.—On Monday, last week, weather too bad for flying first thing; later, Harrison out for trial, and then with Messrs. Greig and Penfold and Lieuts. Sabri, Aziz, Fethe and Solvet. In the afternoon Harrison took Capt. Lucina on biplane, and then trial solo side-by-side monoplane. Pizey out for solo on same machine, afterwards taking Lieut. Hall, Capt. Lucina, and Lieuts. Sabri and Fethe. Lieut. Hall, fine solo on one of the tandem monoplanes; good landing. Geoffrey England giving instruction to Lieuts. Sabri, Fezel, Solvet, Aziz and Fethe on biplane. Busted testing two new monoplanes just recently assembled. Harrison made test, Mr. Lywood as passenger, on Tuesday, but found conditions too bad.

Pizey out for trial Wednesday, and then with Mr. Lywood on side-by-side monoplane, afterwards with Mr. Lywood and Prince Cantacuzene. Harrison taking out Capt. Lucina on biplane, then with Lieuts. Sabri, Aziz, Fezel, Fethe, and Abdullah. Busted made two excellent flights on new machine, climbing quickly, and showing the machine possessed of fine speed. Lieut. Hall made good trip on tandem monoplane, landing well. Jullerot first trial in the evening, taking Mr. Lywood and Lieuts. Sabri, Abdullah, Fethe, Aziz, and Fezel.

On Thursday, Harrison out for test, and then with Capts. Williams and Kunhardt. Pizey made solo on side-by-side monoplane, then making long flight with Prince Cantacuzene on same machine. Busted was up for a number of circuits on one of the new Bristols, making really fine flights and England was busy taking up Lieuts. Aziz, Fethe, and Abdullah. Jullerot on tandem monoplane for solo, then with Lieuts. Abdullah and Sabri. Good solos were made by Lieuts. Sabri, Safet, Fethe, and Fezel, whilst Lieuts. Parker and Grace were also out for trips, all on biplanes. Prince Cantacuzene was out

for a long flight on tandem monoplane, putting up remarkably fine performance.

Very little flying on Friday morning, weather unfavourable. Good work in the evening, Pizey starting things by ascending on side-by-side monoplane with Lieuts. Sabri, Fethe, Fezel, Abdullah, and then with Prince Cantacuzene on tandem machine. Capt. Williams was then taken up on biplane for couple circuits, afterwards Lieut. Safet on tandem monoplane.

Harrison busy giving two flights to Lieut. Shkelton and then to Capt. Williams; Kunhardt and Penfield also; one trip to Lieut. Parker. England was giving biplane tuition trips to Capts. Williams and Kunhardt and Lieut. Aziz, and on monoplane with Lieut. Sabri. Jullerot took Lieut. Sabri for tuition on monoplane and Lieut. Abdullah on biplane. Good solos were made by Lieuts. Aziz, Fezel, Sabri, Fethe, Grace and Parker. Capt. Lucina and Mr. Lywood each made two trips whilst on side-by-side monoplane, Prince Cantacuzene two good flights landing perfectly. Mr. Smith Barry also on same machine flying well. Mr. Bettington three good solos on monoplane each lasting 15 minutes, landing well every time. Lieut. Hall fine trip on side-by-side machine. Busted occupied in testing new machines putting them through tests.

On Saturday, Pizey, as usual, first up, taking Lieut. Tapple for tuition, and then Capts. Penfold and Kunhardt. Harrison solo on side-by-side monoplane and biplane tuition to Capts. Williams, Kunhardt and Penfold. Jullerot, trial of monoplane, and then with Capt. Lucina (2), Lieut. Parker and Mr. Lywood. Mr. Bettington out on monoplane for fully 20 minutes making good flight.

Jullerot trial in the evening on side-by-side monoplane, and then taking up Capt. Penfold on one of the tandem machines. Pizey was out with Capt. Kunhardt in side-by-side, and also Prince Cantacuzene. Harrison was out on biplane for two instructional flights with Capt. Penfold, and then twice each with Capts. Williams and Kunhardt and Shkelton.

Mr. Lywood made a good flight on biplane with right and left-hand turns although weather rather bad. Mr. Bettington was out on one of the tandem monoplanes and put up a very clever show. Prince Cantacuzene also carried out a good solo on side-by-side. Mr. Smith Barry bringing work to a close by ascending on side-by-side and making an excellent flight, showing himself to be a splendid pilot. No flying Sunday.

Royal Flying Corps.—The two factory-built biplanes, one with Gnome motor and the other with Renault engine, and the Maurice Farman machine, have been kept very busy during the past week or so, and on Saturday, for instance, despite the wintry conditions, Major Brooke-Popham and Lieut. Wadham made ten flights, mostly with one or two passengers each time. Some fairly high flying has been indulged in, and 2,000 ft. is now quite a usual altitude. Among those seen in the air have been Capts. Dawes and Allen, Lieuts. Ashton, Porter, Fox; and some very good work has been done on the Maurice Farman biplane by Sergt. Ridd and Private McCudden. On Monday, Mr. Cody passed over Larkhill about 8.30 a.m., flying at a height of 2,000 ft.

BRITISH NOTES

ROYAL FLYING CORPS.

The following appointments were announced in the *London Gazette* of the 4th inst. :—

Special Reserve of Officers, Royal Flying Corps. Military Wing.—To be Second Lieuts. (on probation), dated October 5th, 1912, Henry de Grey Warter and Edward Keith Davies.

Competition at Brooklands.

FOR this Saturday afternoon a bomb-dropping and alighting competition has been arranged to take place at Brooklands, for which half-a-dozen biplane pilots have entered, including T. Sopwith (Sopwith), F. W. Merriam (Bristol), H. Barnwell (Farman), S. Hedley (Sopwith), H. Spencer (Spencer), E. C. Pashley (Sommer). For to-morrow (Sunday) afternoon an altitude test is arranged, in which the entries are G. Sabelli and S. P. Sippe on Hanriots, R. Macdonald on the Vickers, F. P. Raynham on the Flanders, G. H. Handasyde on the Martin-Handasyde, together with the above biplanes, with the exception of Pashley's.

The Forthcoming Exhibition at Olympia.

THERE will be one distinction about the forthcoming Aero Show at Olympia in that it will be entirely given over to aeronautic exhibits, whereas hitherto it has been combined with a show of marine motors and boats. The exhibition will be run on international lines, and it is hoped that the exhibits will include, in addition to the British machines, all the leading foreign makes, so that many people will be relieved from the necessity of going to

OF THE WEEK.

Paris for the Salon. In addition to aeroplanes, it is proposed to have hydro-aeroplanes, hangars, &c., on exhibition, while special arrangements will be made for the model flying, cinematograph displays, &c.

The Naval Twin-Engine Monoplane.

THE twin-engine system has recently been installed on a monoplane built by Messrs. Short Bros., and during tests made by Commander Samson at Eastchurch, the machine, which has two 70-h.p. Gnome engines, performed very satisfactorily.

Flying at Carlingnose.

THE first flights in connection with the new Naval Aviation Station at Carlingnose on the Firth of Forth were made on the 2nd inst. Both Commander Samson on a 100-h.p. Short tractor biplane and Capt. Gordon on a 70-h.p. Short biplane made flights over the Firth from Inchkeith Island to Leith, but both pilots were much troubled by the strong wind. Similar trials were made on the following day when Lieut. Hewlett was also out on the Farman hydro-aeroplane, and the three aviators made some experiments in locating a trio of submerged submarines in the Firth of Forth. Commander Samson was in the air during one trip for an hour and thirty-five minutes, while Capt. Gordon was up still longer. On the 4th inst., an exciting incident occurred when Capt. Gordon's machine capsized, and both he and his passenger got a ducking. They were picked up by a boat from a destroyer, which also towed the machine back to shore.

A Tour of Ireland.

ON Saturday week Mr. Valentine paid a visit to Powerscourt Castle, at the invitation of Lord Powerscourt, and gave an exhibition of flying, which attracted a large number of spectators from the surrounding country. Mr. Valentine now proposes to go on a tour round Ireland, giving exhibitions *en route* wherever there are suitable grounds. It is probable the tour will include the following places:—Mullingar, Cavan, Enniskillen, Sligo, Castlebarr, Galway, Limerick, Killarney, Cork, Waterford, Wexford and Drogheda. **U**

Another Naval Aviation Centre.

A FURTHER Naval aviation depot is being arranged by the Admiralty at Cleethorpes, where the hangars and quarters for the staff will be erected on the Golf Links. The position of the new depot is such that it will be easy for aviators there to police the neighbourhood of the Humber.

A Meeting at Oxford.

OXFORD is to have its first aviation meeting on Thursday, October 24th, at Port Meadow, when arrangements have been made by Mr. Grahame-White and the proprietors of the London Aerodrome at Hendon to carry out a programme of altitude and speed tests and exhibition flights. Among those that are down to take part are Mr. Grahame-White (70-h.p. Farman), Marcel Desoutter (50-h.p. Blériot), Mrs. Stocks (50-h.p. Blériot), Lewis Noel (80-h.p. Farman), J. L. Travers (70-h.p. Farman), and Mr. R. T. Gates (80 h.p. Farman). It is also hoped that Mr. Gustav Hamel and B. C. Hucks will be flying. The charge for admission to the public enclosure will be 1s., and to the paddock 2s. 6d. Passenger flights can be booked from 3 guineas.

Col. Cody tries for the British Empire Michelin Cup.

ON Monday, Col. Cody on his biplane to which he had fitted a 100-h.p. all-British Green engine made a flight for the British Empire Michelin Cup, No. 2. He started from Farnborough and steering by way of Salisbury Plain and Eastbourne got to Lewes, where he was compelled to land.

Mishap with Japanese Machine.

PILOTING the Japanese Sonoda biplane at Hendon on Thursday week, Mr. Meredith after making a couple of circuits inside the Aerodrome, started a cross-country flight. He had not got very far, however, when the machine in making a turn made a dive to the ground. The propeller and under-carriage were smashed, but the pilot escaped unhurt.

An Up-to-Date Lord Mayor's Show.

IN view of the great progress which has been made in aviation during the past year or so, it has been suggested that it is now opportune for aeroplanes to take a leading part in the Lord Mayor's Show. At any rate the subject is being considered by the Committee which is making the arrangements.



"Flight" Copyright.

Mr. J. H. James, the 18-year old I.C.S. student who last week got his R.Ae.C. certificate at the Ewen School at Hendon. Incidentally, he collects the cash prize of £100 offered by the International Correspondence Schools for their first pupil to gain his *brevet*. Mr. James was with his brother, who is also a pupil at the Ewen School, connected with Webb, Peet and Co., of Gloucester, where they both had valuable experience with the Webb-Peet rotary engine. Curiously enough, the ticket was taken quite in "International" style, as the conditions include a Scotchman's school in England and a Welsh pupil on a French biplane.



FOREIGN AVIATION NEWS.

550 Miles in One Day.

BATHIAT's splendid record for the Pommery Cup has at length been beaten, by Daucourt, who on Sunday on a Gnome-Borel with Chauvière propeller, flew right across France from Valenciennes just off the Belgian border to Biarritz. The journey of 875 kiloms. (550 miles) was accomplished in 11 hrs. 40 mins. with but three intermediate stops. Leaving Valenciennes at 6 a.m. the first 200 kiloms. to Buc were traversed in two hours. After an hour's rest the second stage of the journey was commenced, and 2 hrs. 55 mins. saw the 275 kiloms. to Poitiers covered. Then ensued a rest of an hour and five minutes, after which 2 hrs. 10 mins. were taken over the stage of 220 kiloms. to Bordeaux, where Daucourt arrived at 3.10. Getting away again at four o'clock he landed safely at Biarritz at 5.38, the distance for the last stage being 180 kiloms. His actual flying time for the 870 kiloms. was 8 hrs. 48 mins., so that his average speed was practically 100 k.p.h.

Other Attempts for the Coupe Pommery.

ANOTHER very plucky attempt was made on the 4th inst., when Janoir on a Deperdussin monoplane started from Calais at 6.20 a.m., and after making stops at Dourdan, Poitiers and Bordeaux landed at Contis les Bains at 5 p.m., having covered a distance of over 720 kiloms.

Brindejone Has Another Try for the Pommery Cup.

BRINDEJONE DES MOULINAI on his Morane monoplane started from Calais on Monday morning in another attempt for the Pommery

Cup. He, however, only got as far as Beauvais when he decided to give up and make a fresh start.

Molla Training for Coupe Pommery.

By way of training for his proposed attempt for the Coupe Pommery, Molla has put up several lengthy flights on R.E.P. monoplanes at Buc lately. On the 3rd inst., he was flying over Versailles and the surrounding country for over an hour.

A Meeting at Juvisy.

FOR the last meeting for the year at Juvisy on Sunday last several of the prizes were named after aviators who have met their death. A cross-country race to Monthlery and back was for the Poillot Prize, the award for the speed tests over 6 kiloms. was the Ed. Nieuport Prize, the altitude competition was for the Geo. Chavez Prize, while a Charles Voisin Prize was offered in a balloon-attacking contest. The wind during the afternoon was very strong, but a good deal of flying was accomplished, the start being made with the get-away competition, which was won by Helen (Nieuport) in 1 min. 56½ secs. Soon after this Molla arrived from Buc, on his R.E.P. and at once took part in the landing competition, which he won, getting to within 1'22 metres of the indicated spot. Bouvier on a Goupy won the biplane section, being 3'9 metres out. Guillaux (Clement-Bayard) won the cross-country race with Obre (Caudron) second; and Senart on a Blériot was first in the height test, getting up to 4,480 metres. Helen (Nieuport) won the speed race, doing the six kiloms. in 2m. 43½s., Sadi Lecointe (Blériot) being second, while the latter won in the balloon-attacking competition. Bouvier secured the award in the passenger competition.

Bathiat Keeping in Practice.

NOW that his record for the Coupe Pommery has been beaten, no doubt Bathiat will have a try to recapture it. At any rate he is keeping himself in form since his return from the manoeuvres, and on the 3rd inst. was up for over an hour on his Calais-Biarritz Sommer monoplane.

Tetard Now Flying a Sommer.

ON the 3rd inst., Tetard, who has now joined the Sommer School at Mourmelon, was very busy giving trips to passengers on a Sommer biplane.

Encouraging the Military in France.

THE town of Orleans having decided to bear 800,000 francs of the expense, the French Minister of War has decided to create a military aerodrome in the neighbourhood of the city. The General Council of Loiret has also promised a contribution of 50,000 francs towards the expenses.

Good Flying on Caudron Biplane.

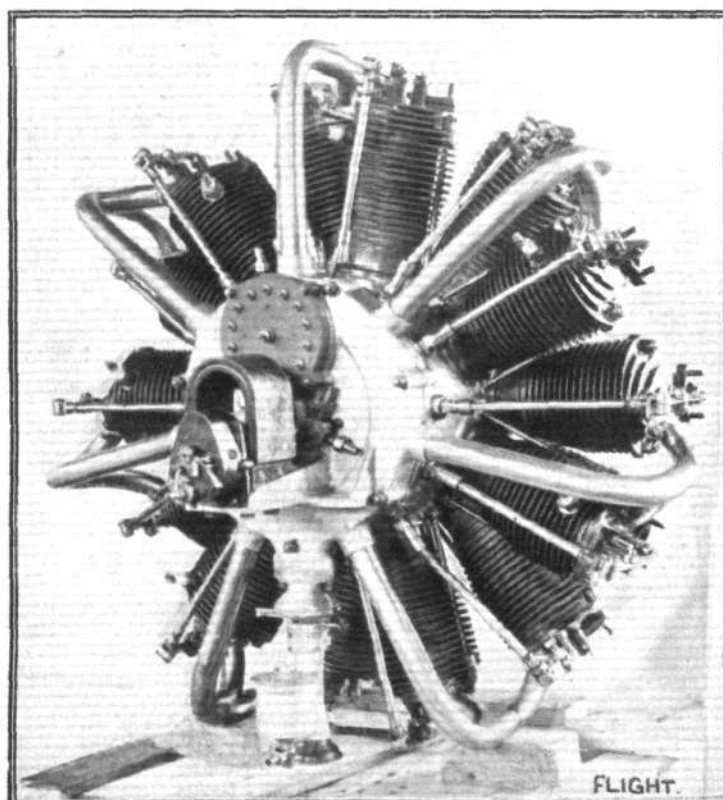
ON the 4th inst., at Crotoy, Lieut. Lehiban was flying for an hour and a-half on his Caudron, and Lieut. Poutrain was up for an hour. Lieut. Gerard, while making tests for his superior certificate between Crotoy and St. Cyr, was brought down at Poix through his petrol supply running out. On Monday, Lieut. Gerard finished his military *brevet* tests, covering 300 kiloms. from Crotoy to St. Cyr and back.

Touring on a Blériot.

COUNT DE LAREINTY THOLOZAN continues to use his Blériot monoplane for calling on his friends. On the 4th inst. he left Etampes, and flying 187 kiloms. in 1 hour 16 mins. landed at La Suze, near Mans, in order to visit a friend. He continued his journey on Saturday, and arrived at his house at Blain in an hour and 9 minutes, having covered in that time 149 kiloms.

The New Height Records.

THE Commission Sportive Aeronautique have now given their recognition to the height record of 4,900 metres made on September 6th last by Roland Garros, and also to that of 5,460 metres made by Legagneux on September 17th.



THE 14-CYL. ANZANI AVIATION MOTOR.—This engine, which in general appearance somewhat resembles the Gnome engine when at rest, is not a rotary engine. It is of 100-h.p., the bore and stroke of the cylinders being 90 by 120 mm. The crank-shaft runs normally at 1,000 to 1,200 r.p.m., while the speed of the Bosch magneto is 3,000 r.p.m.

Paris-Rouen Hydro-Aeroplane Contest Postponed.

UNDER the law passed last November the French Minister of the Interior, through the Paris police department, has forbidden the Paris-Rouen hydro-aeroplane race, which was fixed to take place on October 13th to 15th. The reason given is the obstruction to the navigation of the Seine, which would ensue if the race were held. The Minister of the Interior is to further consider the matter with the Minister of Public Works, and in the meantime the event is postponed *sine die*.

The Aviette Competition.

IN view of the exhibition of "aviettes" at the Paris Salon, the second competition for the Pengeot prize has been postponed until next month and entries may be made up to October 31st. Should the prize not be won at this meeting there will be a final contest on June 1st, 1913. The Pengeot prize of £400 is offered for the first machine to travel ten metres in the air, propelled by muscular energy alone.

Sommer Hydro-Aeroplane at Geneva.

BY way of concluding his series of demonstrations with the Sommer hydro-aeroplane over the Lake of Geneva, Burri on Saturday flew from Geneva to Evian accompanied by Commandant Dolfus. While passing over the Bursinel Cemetery the pilot dropped a crown of flowers on to the tomb of his comrade, Kimmerling.

Three Fatalities in Germany.

ON the 4th inst., while making a very sharp turn on his monoplane at Vahrenwald, near Hanover, August Berkxier fell from a height of about 20 metres, and was so seriously injured that he died almost immediately. On Sunday, a double fatality occurred at Johannisthal, where a monoplane, piloted by Alig, fell from a height of 600 ft.; both the aviator and his passenger were killed.

The Johannisthal Meeting.

THE success of the meeting at Johannisthal last week was marred by the double fatality which occurred on the closing day (Sunday), while flying was practically impossible on the first four days. Some good work was done on Saturday, when Mohns was flying for 1 hr. 52 mins.; Friedrich for 1 hr. 51 min., and Sedlmayer for 1 hr. 29 min. Fokker, trying for altitude record, got up to 3,095 metres. Similar flights were also made on the two preceding days by these pilots.

A Long Flight in Germany.

LIEUT. KASTNER, accompanied by Lieut. Niemoeller, accomplished a splendid flight on Friday week the 4th inst., when he landed at Hanover, having covered over 240 kiloms. in two hours and three quarters.

Flying to Combat Consumption.

WE have it on the authority of Dr. Flemming, an eminent German tuberculosis expert, that exposure to the sun's rays for a quarter of an hour at a high altitude means certain death to the bacilli of tuberculosis. He therefore recommends as a cure for consumption, trips on aircraft.

A Bristol Monoplane at Bucharest.

AT the Roumanian Army Manoeuvres which commenced at the beginning of this week, aeroplanes were in service for the first time. The work accomplished was very good, especially that by Mr. C. H. Pixton on a Bristol monoplane which he was demonstrating before the chief officers of the Roumanian Army.

Reorganisation of Russian Military Aviation.

FOLLOWING the example of other countries, the Russian Minister of War has decided to reorganise Military aviation in Russia, detaching it from the Engineer Regiments and making it a separate Corps with its own officers, &c.

Another American Aviatress.

MISS BURNETTA ADAMS MILLER, who hails from Canton, Ohio, and whose age is said to be 22, qualified on September 17th for a pilot's certificate at the Moisant School at Westbury, L.I. She is the third aviatress to qualify on a Moisant monoplane.

Another American Exhibition Fatality.

WHILE giving a flying exhibition at a State Fair at Trenton, New Jersey on the 3rd inst., the Curtiss machine of Charles F. Walsh fell from a height of 2,000 ft., the pilot being killed instantly.

An Ambassador in the Air.

WHILE visiting Manchester, Mass., on Saturday last, the Right Hon. James Bryce, the British Ambassador to the United States, was invited to make a flight on a hydro-aeroplane which had been flown over by Mr. Starling Burgess. Mr. Bryce accepting, he was taken for a twenty-five minutes' flight much to his enjoyment, he being greatly impressed by the way in which it was possible to see deep down into the water.

Models

Conducted by V. E. JOHNSON, M.A.

"Practical" Aero Clubs.

APART from the correspondence now appearing in FLIGHT several letters have reached us relative to the above, and quite a number have spoken to us personally on the matter. There is undoubtedly a strong desire on the part of a certain number in the neighbourhood of London (and no doubt elsewhere) for the formation or furtherance of such a club. As one correspondent says: "The buying of a £650 Blériot is somewhat beyond me, but the construction or buying of a glider would be feasible if I had somewhere to use it and store it," and there are no doubt others (from whom we should be pleased to hear), who are similarly situated. As stated in last week's issue *vide* Mr. W. H. Emerton's letter, one such club is in existence, and we know personally of a model club, whose new flying ground contains a hill very suitable for the above, and who are seriously entertaining the idea of developing this side of aviation, an idea which we earnestly trust will not be allowed to fall through. There is not the slightest reason that we know of why "gliding" and model work should not be carried on side by side. Every aeromodelist should endeavour to develop as far as possible the instructive side of model work, whether theoretical or practical, and not allow it to be *only* model making for the sake of the model, as it has so very much become in the case of model locomotives and the like. Model work, whether performed with a paper glider, a rubber driven flying-stick, a power-driven tractor, or a glider of sufficient size to carry a human being should be a means to an end, and not the end itself.

One great mistake it has always appeared to us that has been made in the case of the model club movement is that the subscription has (so far as we know) always been far too small.

We cannot see how a club can acquire proper flying rights over certain grounds, maintain that absolutely *sine qua non*, a workshop, at all adequately fitted up, and do any useful work—as a club—under an annual subscription of at least a guinea. So far as we know, such clubs have to be continually relying on outside assistance for almost everything, instead of being (in a large measure at any rate) self-contained, independent, and free to carry on such work as may be decided best. It is only right to add that outside donors have in almost every case that we know of been most kind and considerate in giving the club *carte blanche* in the matter, but the two cases are not the same, and although the formation of fresh clubs is one of the last things we desire to advocate, we feel bound to admit that (in the neighbourhood of London at any rate) there is plenty of scope for a self-contained practical model and gliding aero club—conducted on strictly businesslike lines—with an annual subscription sufficient to place it above the necessity of appealing for outside support either directly or indirectly. We shall be pleased to hear what the readers of FLIGHT have to say in the matter.

Power-Driven Model Flights.

On September 15th, in the early morning, Mr. H. H. Groves was successful in making four consecutive flights with his largest steam-driven model, the longest flight being about 600 yards in length at an altitude of about 50 ft. That four successful consecutive flights and landings could be accomplished without any damage to the machine shows decided progress. Mr. Groves' model is of the loaded elevator type.

Hydro-Aeroplane Floats for Large Power-Driven Model.

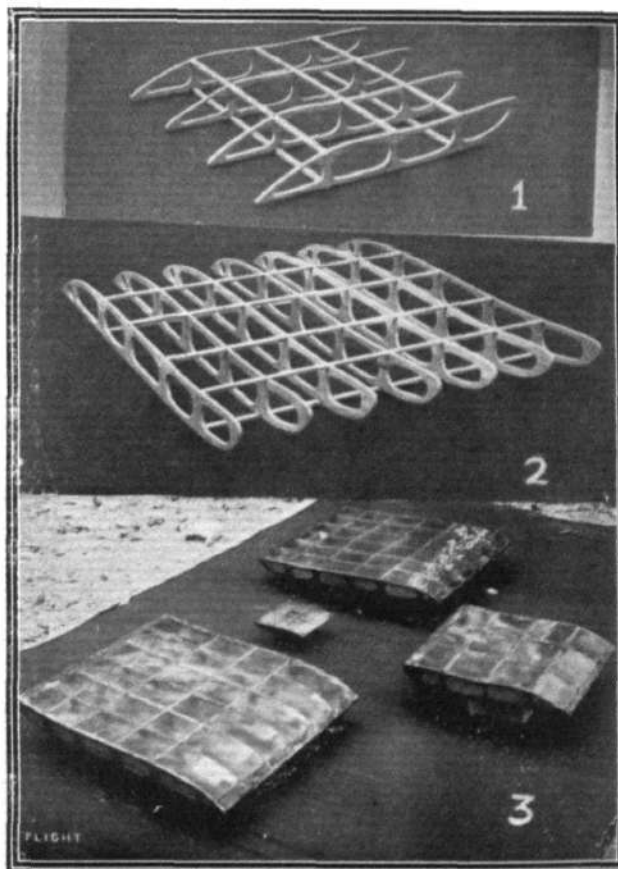
I give this week three illustrations and particulars of a set of large model floats recently designed and constructed by me for a tractor monoplane driven by a 1'03-h.p. Cetonia motor. Total weight of three floats, 2 lbs. 5½ oz. Weight supported as tested in tank 53½ lbs., *i.e.*, these floats were capable of supporting twenty-three times their own weight. The framework, as shown in the photos, was white wood—the bottoms and leading and back edges of the floats were covered with mahogany veneer one-fortieth of an inch thick. The tops and sides (where open) and also the bottoms were then covered with ordinary Jap silk, first wetted and then stuck on with ordinary thickish glue. Being put on wet and as tight as it could be conveniently pulled, when dry it was "as taut as a drum"; the silk was then given two coats of Bragg-Smith varnish. Previous to putting on the silk (which, it should be noticed, was quite unproofed in any way) the wooden framework and the veneer wood were varnished with the same. On Thursday last the floats were tested on the model (about 27½ lbs. in weight) and were found to be quite successful, both as hydroplanes and as being quite impervious to water, as an examination, after a 3½ hours' continuous

"riding" both upon and under the surface of the water, it was found that not a single drop of water had got into the floats, nor had the colour of the varnish changed in any way. The water was very rough at times, and the test was a very severe one, both as to "watertightness" and "strength." Particulars and illustrations of the complete model will be given in an early issue. The dimensions of the two larger floats are: 2 ins. by 22½ ins. by 18 ins. The smaller: 12 ins. by 12 ins. by 2 ins. The wood was supplied by Messrs. T. W. K. Clarke and Co.

Efficiency Formula.

Writing *re* the formula $\frac{\text{total weight of model} \times \text{duration}}{\text{weight of rubber}}$, Mr. C. Ian Burrell says that he considers the above formula very fallacious for a definite weight of rubber means definite energy, therefore $\frac{\text{weight of rubber}}{\text{time}}$ gives power, hence the formula in use gives $\frac{\text{weight of model}}{\text{power}}$ which is the measure of efficiency. Surely the most efficient model is that which carries the greatest amount of load over the greatest distance in the least time for the least expenditure of power, which gives a formula $\frac{W (\text{weight}) \times S (\text{distance})}{T (\text{time}) \times P (\text{power})} = \frac{W \times S}{T} \times \frac{1}{w (\text{weight of rubber})} \left(\frac{w}{T} = \text{power} \right)$

The present formula gives credit to slow-speed machines which do not require much power, but knocks a high-speed machine on the head right off. Quite a possible example is of two machines, both of the same weight and fitted with the same amount of rubber—yet different dimensions such as area, angle of incidence, camber, propellers, &c. Both may fly the same duration, but one flies a greater



HYDRO-AEROPLANE FLOATS.—"V.E.J." type for large (1-h.p.) power-driven models, Figs. 1 and 2 showing framework, and Fig. 3 set of three finished floats. In Fig. 3 a usual sized model float is inserted for comparison.

distance owing to its more efficient design, yet with the present formula they are both given the same points on $\frac{W \times T}{w}$. In the

formula $\frac{W^p \times S^q \times T^r}{T^s \times w^y}$ it is difficult to know what values to give $p, q, r, x,$ and y . Again, time is much easier to measure than distance owing to wind velocity, which can, however, be allowed for; or one might get a maximum duration and a speed test over a measured 100 yards.

As it so happens, a day or so before receiving Mr. Burrell's communication we had occasion to apply the formula to two models *whose capabilities we were well acquainted*, and the result was extremely unsatisfactory. As it stands the formula cannot be applied indiscriminately to different types of models—there must be some common factor or factors. We shall be pleased to hear further from our readers *re* the above.

Replies in Brief.

A. BURNS (Toronto).—We regret we do not know of such a motor as the one you ask for that we could really recommend, and we

are afraid you will experience considerable difficulty in securing one. Why don't you procure your motor *first*, and then build your model to suit it; this is the only practical way of doing it that we know of at present?

R. KEENEYSIDE.—Certainly, write to the secretary. Not that we know of.

J. A. GOODALL.—Yes, send full particulars, and we will publish them and photos later on.

C. C. HORNER.—There are several points in your communication not yet clear. What do you mean by movable "floats?" the model is not a hydro-aeroplane, also the description of these side "float-like" planes, and how they are worked and made is very obscure. Kindly send further particulars and part drawings, not necessarily for publication.

ACCACIO DA GAMA.—You will find those given in our advertisement columns as suitable as any we know of.

AEROMANIAE.—You should triangulate your A frame still further with internal bracing wires if it bends out as well as in. If in, only, you would probably find T-shaped wood stiffer. You can get it at Messrs. J. Bonn and Co. No, don't place rubber underneath. Your main plane should stiffen it at the place you mention

KITE AND MODEL AEROPLANE ASSOCIATION.

Official Notices.

British Model Records.

Hand-launched ...	{ Distance ...	A. E. Woollard ...	477 yards.
	{ Duration ...	A. F. Houlberg ...	89 secs.
Off ground ...	{ Distance ...	F. W. Jannaway ...	84 yards.
	{ Duration ...	G. Rowlands ...	30 secs.
Hydro, off water ...	{ Duration ...	G. P. Bragg-Smith ...	25 secs.
Single-tractor screw, { Distance ...		H. R. Weston ...	84 yards.
hand-launched ...	{ Duration ...	F. W. Jannaway ...	11 secs.

Competitions.—The three open kite competitions postponed from July 20th and September 14th, on account of unsuitable weather, will take place on Wimbledon Common on October 19th.

The first competition will commence at 2.30 sharp, for prizes, presented by Messrs. Brooke and Westorp (see page 644 FLIGHT, July 13th, for full details), the second competition, for the best use a kite can be put to, will follow, after which the Junior Contest will take place (see page 804, FLIGHT, August 31st for full details).

Next Official Trials.—The next officially observed flights for registration of model aeroplane performances for the purpose of establishing records will be held on Wimbledon Common on October 26th, at 3 o'clock, on the plain, Wimbledon side of the windmill. The trials will be for distance and duration, hand-launched or off ground, also for tractor screws, distance and duration, hand-launched or off the ground. It is hoped that there will be a good entry, especially for those off ground as the official record is very low.

The Royal Aero Club.—The committee of the Royal Aero Club has appointed the Kite and Model Aeroplane Association the authority to govern models in this country for the year 1913.

International Aero Exhibition, Olympia, 1913.—This exhibition will be held under the auspices of the Royal Aero Club, at Olympia, in February. Full details about Model Section will appear in these notices as soon as possible.

27, Victory Road, Wimbledon.

W. H. AKEHURST, Hon. Sec.

MODEL CLUB DIARY AND REPORTS.

CLUB reports of chief work done will be published monthly for the future. Secretaries' reports, to be included, must reach the Editor on the last Monday in each month.

Aero-Models Assoc. (N. Branch) (15, HIGHGATE AVENUE, N.).
OCTOBER 12TH. Finchley trials for Enfield (r.o.g. formula) contest.

Aldershot Aero Club (37, ALEXANDRA ROAD).
Flying every Saturday at 3. Sundays 10.30 at Cranmore Lane.

Blackheath Aero Club (48, HAFTON ROAD, CATFORD, S.E.).
Week-end flying at Grove Park and Blackheath.

Hendon Model Aero Club (8, MONTAGU ROAD, W. HENDON).
OCTOBER 12TH. Distance contest (prizes), 19th monthly duration trophy.

Leytonstone and Districts Aero Club (64, LEYSPRING ROAD).
OCTOBER 12TH AND 13TH. Wanstead Flats for certificates.

Paddington and Districts (77, SWINDERLY ROAD, WEMBLEY).
OCTOBER 12TH. Duration handicap, any type model, 1st, 2nd and 3rd prizes.

Reigate, Redhill and District (8, BRIGHTON ROAD).
OCTOBER 12TH. Flying Earlswood Common. 13th "Wiggie," 11 a.m.

Sheffield Model Aero Club (35, PENRHYN ROAD, SHEFFIELD).
OCTOBER 12TH. Competition 3 p.m. Marsh Farm, High Lane, Ecclesall, near J. L. Hall's Flying Ground. Oct. 17th, General Meeting 7.30 p.m., Broomhead's Dining Rooms, Leopold Street.

Windsor Model Flying (10, ALMA ROAD, WINDSOR).
OCTOBER 12TH. Tractor meeting, 2.30, Home Park.

Yorkshire A.C. (Model Sec.) (53, WEST STREET, LEEDS).
OCTOBER 12TH. Flying, Poppy Fields, Beeston.

AIRSHIP NEWS.

The British Military Airships.

SEVERAL trials have been made with both "Beta" and "Delta" at Farnborough during the past few days. On Wednesday week the latter was out and made one or two lengthy voyages with five passengers on board. She was also out on the following day and on Sunday and Monday. The "Beta" was tested on Saturday, and on Monday she took a crew of naval men from Sheerness for an instructional voyage.

A New Scouting Dirigible.

THE new baby dirigible designed by Mr. E. T. Willows, specially for naval scouting was tested at Farnborough on Tuesday. The design is generally similar to that of the dirigible with which Mr. Willows made his trip across the Channel, the car being suspended from a transverse beam slung beneath the envelope. Only a pilot and an observer are carried, and in its trials the dirigible showed itself capable of a speed in the neighbourhood of 50 miles an hour.

The Work of "Parseval VI."

THE "Parseval VI," which has been stationed at Lucerne for some time, finished her season on Saturday last, and was deflated. She was packed up and it is said that she will be sent to England. While at Lucerne she made twenty-five ascents and was in the air for an aggregate of 36 hrs. 20 mins., representing a distance covered of about 550 miles.

The German Naval Zeppelin.

THE Zeppelin cruiser built to the order of the German Admiralty had her first trial at Friedrichshafen on Monday last. On the first opportunity she will attempt a voyage of two hours' duration, which was one of the conditions of her acceptance by the Navy. A machine gun is to be fitted to the airship, which will, of course, also be

equipped with wireless telegraphy. Three motors are fitted, each of 170-h.p. and driving two propellers, one pair of which is arranged in the fore part of the vessel while the other four are grouped aft. A kitchen is fitted up on the airship, and the heat in the exhaust from the motors is utilised for cooking purposes.

Seven Months' Work with "Victoria Louise."

AT the conclusion of her season's work a few figures have been published concerning the use made of the Zeppelin liner, "Victoria Louise" during the seven months she has been in commission. Altogether 183 excursions were made, the distance covered totalling to 25,680 kilometres, giving an average of 143 kilometres for each trip. The number of passengers carried total to 3,902, giving an average for each voyage of 21, not including the crew.

Storm Damages Dirigible Shed.

THE very severe storm which raged over Germany during the middle of last week caused a good deal of anxiety to those in charge of the Zeppelin dirigible "Hansa." Several portions of the shed in which she was housed at Fuhlsbuttel, near Hamburg, were torn away, while several planks were blown out of the side and it was feared the shed might collapse on the airship. Fortunately, however, this catastrophe was averted.

A German Dirigible Harbour Closed.

IT has been decided to pull down the dirigible shed, which was erected at Munich some time ago at a cost of £4,000, to house a Parseval airship. The situation of the shed makes a landing so difficult that it is not worth while running the risk of disaster. The company which had leased the shed are moving to the north of Germany, where they will build an airship on Schutte-Lanz lines, specially designed for naval use.

CORRESPONDENCE.

*. * The name and address of the writer (not necessarily for publication) MUST in all cases accompany letters intended for insertion, or containing queries.

Correspondents communicating with regard to letters which have appeared in **FLIGHT**, would much facilitate ready reference by quoting the number of each letter.

Stream-Lining the Rudder.

[1643] There seems to be a general impression that machines of the Nieuport and Hanriot type are subject to side-slips and nose-dives, and, further, that owing to the peculiar stream-line of the body, the rudder and elevators are liable to be screened as a result of the abnormal speed attained during the latter condition.

The case quoted is that of Capt. Loraine, who over-banked with a failing engine. Half-an-hour previous to his fatal accident he had a side-slip, followed by a nose-dive from approximately 1,000 ft., but was able to recover before reaching the ground. His death was caused by the same thing from about 500 ft., from which height he was unable to straighten up. The only other case is that of Edouard Nieuport, who found it necessary to bank steeply to avoid some trees. He was coming down *en vol plané*, and his engine refused to pick up. There was a gusty wind blowing at the time.

These are the only cases of nose-dive or side-slip on this type of machine, and as they are so easily explained, perhaps it would be as well to point out that the above impression is entirely without foundation.

Surely one can credit such men as Edouard Nieuport and Pagny with having taken into account the bare chance of the controls being negatived when designing their stream-lines.

Brooklands Aerodrome.

SYDNEY O. SIPPE.

Gyroscopic Force in Aviation Accidents.

[1644] I don't wish you to think that I am trying to monopolise your correspondence columns, but there is another matter in your very interesting issue of **FLIGHT**, dated August 24th, upon which I should like to touch. The letter in question is that from Mr. Thomas Preston Brooke of Chicago. His letter (1612) is headed "Gyroscopic Force in Aviation Accidents."

A great deal has lately appeared in the aeronautic press in this country on this gyroscopic "bug-a-boo." As I think the greater portion of it is all nonsense, I have done my best to correct the ill-effects of letters circulated by those who know nothing about the subject from a practical standpoint, or else who have "an axe to grind," and hence whose opinions are biased.

Mr. Thomas Preston Brooke manufactures a type of motor in which he aims to eliminate the gyroscopic effect. His motor is a machine combining two rotary motors going in opposite directions. If the gyroscopic effect is so undesirable, why is it that Mr. Brooke's motor is not used more generally in this country? I have never seen it fitted to a single aeroplane, nor does it hold a record of any kind in this country. Of course, it may be a very excellent motor for all that, but the necessary complication of connecting two rotary motors together so as to revolve in opposite directions is, in my opinion, a step which is in the wrong direction and entirely unnecessary. Of course, that is only my personal view, and I am not interested in the matter in any way financially. I have several times taken the position of a sharp critic simply because I am vitally interested in the development of the aeroplane, and wish to render whatever assistance I can as a practical aviator and aeronautical engineer.

Mr. Brooke, in his letter, seems to think that practically all of the aeroplane accidents may be attributed to the dreaded gyroscopic force so-called. Personally, I am of the opinion that there has not been a single accident caused by the gyroscopic action of the motor. I don't mean to say that this action is absent, but I do say that, as a practical aviator, I never noticed its effect, and that I never had to correct my controls in the manipulation of my aeroplane to counter-balance this terrible (?) force.

The apparatus Mr. Brooke used to demonstrate the deadly effect of this gyroscopic force I had occasion to examine while flying at the Chicago meet. Briefly, it consisted of a series-wound motor with a heavy fly-wheel on either end of the shaft; and a large portion of the weight of these fly-wheels was located in the periphery. Now anyone who is acquainted with the series-wound motor knows that it has no speed regulation. The more current you put into it the faster it will go. In demonstrating the gyroscopic effect Mr. Brooke ran the motor up to a speed of perhaps three or four thousand revolutions, and then endeavoured to change the plane of rotation of the revolving fly-wheels quickly. Of course an enormous gyroscopic effect was produced. But this experiment was very far from what actually takes place in an aeroplane. Under flying conditions the speed of rotation of the engine is never more than twelve or fourteen hundred revolutions per minute, which is about one-third of the speed at which he revolved his fly-wheels. Further-

more, the weight of a rotary engine is not by any means all located in the periphery. The heaviest parts are located near the centre of rotation where the gyroscopic force is much less. Then again no sane aviator endeavours to change the plane of rotation of his motor suddenly. I claim that if Mr. Brooke performed an experiment which was more nearly actual practice, he would not find that the gyroscopic effect is so pronounced as he thinks it is.

Leaving theory aside, which at the best is often unsatisfactory, and turning to practice, let me say that, as an aviator who has flown hundreds of miles in a Blériot monoplane fitted with a rotary Gnome motor of 70-h.p., I have never had to allow for this gyroscopic effect. This is in spite of the fact that one of my stock feats in exhibition flying was to *vol plané* at a sharp angle from a height of one or two thousand feet, and when twenty or thirty feet from the ground change the plane of rotation of my engine, and shoot into the air again. And never once did I notice any gyroscopic effect. While Mr. Brooke (meet of 1911) was in Chicago telling all of us boys how dangerous was the gyroscopic effect, we were racing around the short course at Grant Park, banking our machines at 60°, and turning corners sharply with absolutely no difficulty and with no fatality.

There are enough impediments in the way of the aeroplane without putting in imaginary ones. And he who does not think the gyroscopic effect is largely imaginary had better ask one of your prominent aviators who uses the rotary engine in order to have my opinion substantiated.

Mass., U.S.A., Sept. 26th, 1912.

EARLE L. OVINGTON.

Gyroscopic Action.

[1645] I was much interested to see in a note of yours, following a letter from Mr. R. M. Pearson on the above subject in your issue of September 21st last, that gyroscopic force appears to set up "a bad tremor through the machine when turning." It appears to me that the explanation of this lies in the gyroscopic torque induced by the two-bladed propeller, as suggested in my letter to **FLIGHT** of June 29th last. If this is the case, it would be felt on any single-propeller machine, whether fitted with a rotary engine or not. It would be interesting to know if this is the case. With regard to the general question of gyroscopic force, it is a pity that so much mystery seems to be made about it in some quarters. For instance, in **FLIGHT** for August 24th last, Mr. T. P. Brooke speaks of the "erratic action of gyroscopic force." From this anyone would suppose that it followed no law and that prediction was impossible. Instead of this, the laws are comparatively simple, and bear a close and analogous relation to those governing centrifugal force. For if we consider a mass M moving in a circular path with linear velocity V and angular velocity ω ($= V \div \text{radius}$), the centrifugal force is equal to $MV \times \omega$. The case of gyroscopic torque is equally simple. If we consider a body of moment of inertia I revolving at angular velocity Ω whose axis of revolution is turned in space at angular velocity ω , the gyroscopic torque is equal to $I\Omega \times \omega$.

Centrifugal force is the product of a linear momentum, and the angular velocity with which the direction of this linear momentum is changed in space. Similarly, gyroscopic torque is the product of an angular momentum, and the angular velocity with which the direction of the axis of the angular momentum is turned in space. Both are a consequence of Newton's first law of motion.

As you state in your note referred to above, the difficulty in the case of the aeroplane lies in finding the angular velocity with which the direction of the spinning axis is turned in space.

One would expect the worst case to be that in which a sudden wind eddy or gust throws up or down the nose of the machine, so generating a sudden torque tending to turn the machine round a vertical axis. I note that Mr. Brooke states that "a very sudden lift or drop in the front end" induces a force which tends to pitch the machine violently downward. It would be interesting to know by what reasoning or experiment he arrives at this conclusion, as gyroscopic torque always appears round an axis at right angles to that of the disturbing torque.

Rugby.

R. C. CLINKER.

The Death of Mr. R. C. Fenwick and a Proposed Memorial.

[1646] It has recently come to my notice that at the moment when Fenwick's accident occurred, a passenger in another aeroplane then in the air was thrown violently from his seat against part of the machine, and cut his face badly, while the pilot of that aero-

plane, being strapped in his seat, retained his equilibrium, and that of his machine. If, therefore, the pilot referred to had not been wearing a safety belt, it is probable that we should have had the unique experience of witnessing two accidents at one and the same moment, both proceeding from the same cause. If this fact was brought to the notice of the Committee of the Royal Aero Club, it seems to me that their published opinion of the cause of Fenwick's accident might have attributed the accident primarily (if not entirely) to the admittedly exceptional conditions which existed at the moment of the accident, and the absence of a safety belt, especially when it is remembered that it occurred at a notoriously dangerous spot. In all probability, the first gust upset Fenwick out of his seat and caused his feet to slip over the rudder control, and just as he was recovering himself and flattening out his machine, the second gust arrived and rendered complete recovery impossible.

On August 24th, when there were gusts almost as sudden, all the pilots up were giving a wide berth to the spot where Fenwick was killed, and the majority were, no doubt, wearing safety belts—Parke certainly would be.

Several personal friends of the late Mr. Fenwick have asked to be allowed to contribute to a fund which it is proposed to raise for a memorial to him, to be erected either at his birthplace or some other suitable spot. It occurs to me that there are many people in all parts of England, some of whom actually met Fenwick and knew him personally, and some who admired him "at a distance," who may wish to have an opportunity of contributing to this fund, and I would not like to deprive them of such an opportunity through ignorance of its initiation. His death was unique in one way. It destroyed an individual who was not only a pilot, but the inventor, designer, and constructor of a type of aeroplane which, in the opinion of many well qualified to know, was a distinct advance and one likely to survive. He, at any rate, may be said, without exaggeration, to have given up his life to promote the science of aviation.

Those who would like to subscribe to the memorial above mentioned (small subscriptions will be welcomed as well as large) are asked to send them to me, or direct to the North Eastern Bank, South Shields.

Public acknowledgment will be made from time to time of all sums received, and a committee of subscribers formed in due course to administer the fund.

6, Bessborough Gardens, London, S.W., W. R. BINKS.
Oct. 4th, 1912.

Aeroplane Brakes.

[1647] I should be much obliged if you could inform me through your columns or by letter, if any kind of brake has been discovered for aeroplanes, and if so, what form it takes.

Dublin. E. R. KNOX-WHITE, Lieut.

[The Cody biplane carried a chain tied round its tail skid during the military trials, but we have not seen any other brake device on aeroplanes.—ED.]

Re Weston Hurlin Co.

[1648] In order to prevent any misunderstanding we beg to inform all readers of FLIGHT that we are now in no way connected with any firm located in "Shirland Mews, Paddington," our late business address. All orders sent to the late Weston Hurlin Co. for execution have been handed to Messrs. Wadlows, 10, Peshurst Road, South Hackney, pending settlement of the firm's affairs, who have for some considerable period acted as our agents in South Hackney.

H. HURLIN,
For the late WESTON HURLIN CO.

Monoplanes—Lessons from Models.

[1649] The two recent accidents to monoplanes by which four valuable lives have been lost remind me of the behaviour of some of my paper gliders. In my experiments a monoplane would make several satisfactory flights, but on another occasion it would go about half way then suddenly turn and drop to the ground like a bird that is shot. I have never known a biplane to do this, nor has a monoplane with wings like the Dunne. There must be some reason for this, but so far it has been a great puzzle to me, and I regret that I am unable to give any explanation of it, otherwise it might have some bearing on recent accidents. There is apparently one particular speed at which paper gliders fly best, and if that is exceeded they seem to come to grief. No doubt there are others who have had the same experience.

West Kirby. C.T.P.

Military Aviation in the Balkan States.

Now that hostilities have actually commenced in the Balkan States, something is likely to be heard of the good number of military officers belonging to the several armies who have been undergoing instruction in British and Continental schools. Although Turkey has no recognised flying corps attached to her Army, a fair number of officers have been instructed, including half-a-dozen who have been trained at the Bristol schools in England, and who were called home a few days ago. Others have been taught at the Blériot, Farman and R.E.P. schools in France. The Roumanian Army also has several aviators, as has also the Servian, three, in fact, having just taken their *brevets* at the Blériot school at Etampes. The Bulgarian Army likewise has a strong team of aviators, and a fair number of machines of various types. Montenegro has had several officers trained in France, and the Greek officers who were taught at the Farman school have proved themselves very good flyers, one or two having qualified for the French superior certificate.

Another Aviator for Bulgarian Army.

ON Tuesday, at the Bristol School at Brooklands, Lieut. Loutchieff, of the Bulgarian Army, successfully completed his tests for the Royal Aero Club pilot certificate. He left at once for Sofia, where he will have charge of one of the Bristol monoplanes recently supplied by the Bristol Co. to the Bulgarian Government. Lieut. Loutchieff, who was at the school for a comparatively short time, proved a very apt pupil, and doubtless will do valuable work in his native land.

Parachutes for Pilots.

IN an interesting letter to the *Birmingham Daily Post*, G. P. Lempriere, a professional aeronaut, summarily disposes of the notion, so popular with some people, that the danger of aeroplane accidents might be minimised by using parachutes. The point that interests us most in Mr. Lempriere's letter is that from his own personal experience, he has learned to view a parachute descent originating from a low altitude as a dangerous undertaking, because from a height of anything less than 500 ft. the parachute fails adequately to check the descent.

In the course of time, those who would hustle our knowledge of the art by spontaneously generated ideas of this description, will doubtless come to realise the truth, which is that the aeroplane itself is the best thing the pilot can put his trust in, in emergency.



Aeronautical Patents Published.

Applied for in 1911.

Published October 10th, 1912.

22,942. E. F. KOMM. Aeroplane.

Applied for in 1912.

Published October 10th, 1912.

2,783. SOC. DES MOTEURS GNOME. Motors.

7,587. M. CHAUMERET. Parachute for aërostation and aviation.

10,618. J. PELLETIER. Doors for aeroplane sheds.

PRINCIPAL CONTENTS.

	PAGE
Ourselves—FLIGHT to be 3d.	908
The Avro Monoplane (with scale drawings)	910
Safety Helmets	913
Aero Educational Premiums	913
Royal Aero Club. Official Notices	914
Flying at Hendon Aerodrome	915
From the British Flying Grounds	917
British Notes of the Week	920
Foreign Aviation News	921
Models. Conducted by V. E. Johnson, M.A.	923
Airship News	924
Correspondence	925

FLIGHT.

44, ST. MARTIN'S LANE, LONDON, W.C.

Telegraphic address: Truditur, London. Telephone: 1828 Gerrard

SUBSCRIPTION RATES.

FLIGHT will be forwarded, post free, at the following rates:—

UNITED KINGDOM.

ABROAD.

	s. d.		s. d.
3 Months, Post Free	3 9	3 Months, Post Free	5 0
6 " " "	7 6	6 " " "	10 0
12 " " "	15 0	12 " " "	20 0

Cheques and Post Office Orders should be made payable to the Proprietors of FLIGHT, 44, St. Martin's Lane, W.C., and crossed London County and Westminster Bank, otherwise no responsibility will be accepted.

Should any difficulty be experienced in procuring FLIGHT from local news-vendors, intending readers can obtain each issue direct from the Publishing Office, by forwarding remittance as above.